

Demonstratives: identity vs. similarity

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AG 2 Demonstratives

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1 Introduction

König (2012)

Many languages have demonstrative expressions of verbal manner, nominal quality and adjectival degree – subsumed under "manner demonstratives"

Some languages have even a single expression covering all of these, like German *so/solch*, Polish *tak*, and Turkish *böyle*.

German *so/solch*

- broad range of uses (cf. Umbach & Ebert 2009)
- basic: demonstrative expression, has a deictic and an anaphoric use, and can be combined with adjectival/nominal/verbal phrases.

(1) a. (speaker pointing to a person):

So groß ist Anna.

'Anna is this tall.'

b. (speaker pointing to a table in a bar):

So einen / einen solchen Tisch will Anna kaufen.

'Anna wants to buy such a table / a table like this.'

c. (speaker pointing to someone on the dancing floor):

So tanzt Anna.

'Anna dances like this.'

In (1), *so* is a demonstrative accompanied by a demonstration gesture. At the same time, it is a modifier specifying

(a) Anna's height – degree modifier

(b) the table Anna wants to buy – nominal modifier

(c) Anna's way of dancing – verbal modifier

- (i) How is it possible that a demonstrative expression functions as a modifier? (and moreover, as a modifier of adjectival degree, nominal quality and verbal manner at the same time?)
- (ii) What is the target of the demonstration gesture – what does the speaker point at?

Umbach & Gust (2014)

so is a "similarity demonstrative"

- the target of the demonstration gesture is the object / event the speaker points at
- the demonstrative expresses similarity between the target of the demonstration and the referent of the demonstrative phrase.
- similarity demonstratives constitute a cross-linguistically relevant class

Topic of the talk

- How do similarity demonstratives relate to run-of-the-mill identity demonstratives?
so ein Auto/such a car vs. *dieses Auto/this car*
- How do similarity demonstratives relate adjectives expressing similarity?
so ein Auto/such a car vs. *ein ähnliches Auto/a similar car*

Focus on *so* in nominal phrases (*so ein Auto / solch ein Auto / ein solches Auto*)

Plan

- 2 summary of the analysis in Umbach & Gust (2014)
- 3 similarity demonstratives vs. identity demonstratives in German
- 4 similarity demonstratives vs. similarity adjectives in German
- 5 cross-linguistic findings

2 The analysis of similarity demonstratives in (Umbach & Gust 2014) (U&G)

2.1 What is the target of the demonstration gesture

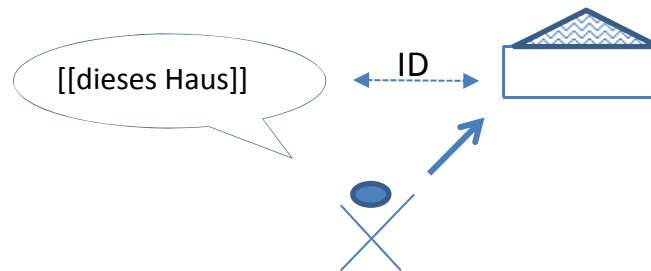
- Ehlich (1987), for German *so*: The speaker points to aspects of objects (not to the object itself).
- Fricke (2007): German *so* is an object demonstratives like *dieser* 'this' since both require a pointing gesture.
- Stukenbrock (2010): German *so* may interact with different types of iconic gestures.
- Carlson (1980): English *such* refers to kinds (subkinds of the kind denoted by the noun)
- Anderson & Morzycki (to appear) German *so* and Polish *tak* refer to kinds – nominal kinds / event kinds / degree kinds

- U&G, for German so in nominal phrases:
 - (i) The target of the demonstration gesture is the object the speaker points to (empirical evidence against a directly kind-referring analysis is shown in sec.3)
 - (ii) The demonstrative expresses similarity between the target of the demonstration and the referent of the demonstrative phrase.

2.2 The basic idea of similarity demonstratives

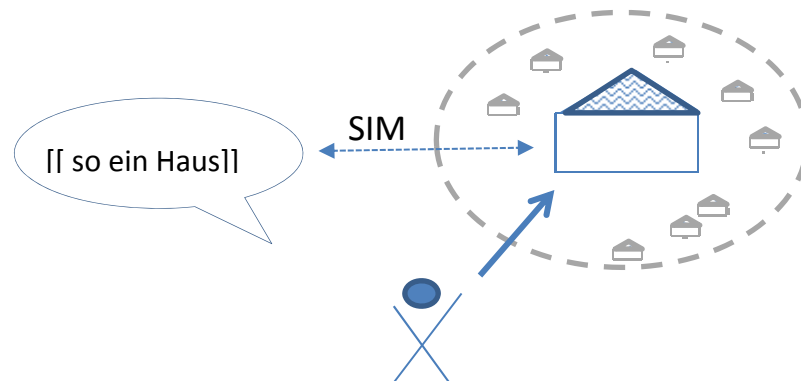
Identity demonstratives (*dieser/this*):

the referent of the phrase is identical with the target of the demonstration



Similarity demonstratives (*so / such*):

the referent of the phrase is similar to the target of the demonstration



so-phrases generate ad-hoc kinds

→ The similarity analysis does not deny that *so*-phrases denote kinds and instead explains how these kinds come into existence.

NB: *So*-phrases are directly referential in the sense of Kaplan (1989). For another analysis dismissing identity of the target of the demonstration and the referent see Nunberg's adaption of Kaplan theory (Nunberg 1993, 2004)

Goodman (1972):

Similarity is trivial without specifying "respects of similarity" (features of comparison)

2.3 How to determine relevant respects of similarity?

Prasada & Dillingham (2006) (experimental study)

There are two types of properties associated with mental concepts:

k-properties – properties ascribed to entities because they are the kind of things they are
t-properties – factual and statistical properties

- (2) a. Dogs, in general, are four-legged.
b. Dogs, by virtue of being the kinds of things they are, are four-legged.
- (3) a. Barns, in general, are red.
b. # Barns, by virtue of being the kinds of things they are, are red.

U&G: Features of comparison relevant in the interpretation of nominal *so*-phrases are *k-properties*:

- (4) A: (pointing to a car in the street):
So ein Auto ist Annas Auto auch.
'Anna's car is one like this.'
- B: In welcher Hinsicht?
'In which respect?'
- a. A': Annas Auto hat auch einen Gasantrieb und eine Ladeklappe.
'Anna's car also has a natural gas drive and a hatch.'
- b. A': Annas Auto ist auch vollkommen verbeult.
'Anna's car is also heavily dented.'
- c. A': ?? Annas Auto hat auch einen CD-Spieler.
'Anna's car also has a CD player.'
- d. A': ???? Annas Auto hat auch eine Kiste Bier auf dem Rücksitz.
'Anna's car also has a box of beer on the back seat.'

2.4 The definition of the similarity relation

similarity is a 3-place relation **SIM (x, x_{target}, F)**

where **x** referent of the demonstrative phrase
x_{target} target of the pointing gesture
F set of relevant features of comparison

[[so ein Auto]] = $\lambda Q. \exists x. \text{SIM}(x, x_{\text{target}}, F) \ \& \ \text{car}(x) \ \& \ Q(x)$

In order to spell out the similarity relation, U&G make use of multidimensional attribute spaces known from AI (close to, e.g., Gärdenfors' 2000 *conceptual spaces*).

- Multi-dimensional spaces are spanned by features of comparison.
- Individuals are mapped into multi-dimensional spaces by generalized measure functions.
- Similarity is defined such that two individuals are similar iff they are indistinguishable given a certain set of features. (cmp. Tversky's contrast model)

→ similarity as used in the interpretation of the demonstrative *so* is an equivalence relation – symmetric, transitive, reflexive.

(for details cf. U&G)

3 Similarity demonstratives vs. identity demonstratives in German

3.1 The Similarity demonstrative hypothesis

Diessel (1999) Semantic features encoded by demonstratives:

Deictic: Distance (neutral, proximal, distal, ...)
Visibility (visible, invisible, ...),
etc.

Quality: Ontology (location, object/person),
Animacy (animate, inanimate),
etc.

Hypothesis:

There is a distinction between identity and similarity demonstratives which is relevant across languages.

- identity demonstratives (*dieser / this*):
the referent of the phrase is identical with the target of the demonstration
- similarity demonstratives (*so / such*):
the referent of the phrase is similar to the target of the demonstration

Why not any other 2-place relation? *next-to-each-other, married, different ...*

In Cognitive Science, similarity is considered as a basic concept of human cognition:

Tversky (1977): "Similarity [...] serves as an organizing principle by which individuals classify objects, form concepts, and make generalizations."

Quine (1969): "... surely there is nothing more basic to thought and language than our sense of similarity; our sorting of things into kinds."

Recall:

- Carlson (1980): English *such* refers to kinds (subkinds of the kind denoted by the noun)
- Anderson & Morzycki (to appear) German *so* and Polish *tak* refer to kinds – nominal kinds / event kinds / degree kinds

Interpreting *so* / *such* by similarity

- is supported by transparent paraphrases: *so* – *wie dies* / *such* – *like this*
- provides an analysis of, e.g., German *so*, without presupposing the existence (and availability for pointing gestures!) of arbitrary kinds.

3.2 Evidence against a directly kind-referring analysis

Generic usage of definite NPs requires that the kinds referred to are "well-established" cf. Krifka et al (1995) – *the bottle* / *the Coke bottle* / ?? *the green bottle*.

(5) (speaker pointing to a car in the street):

a. *Dieses Auto* will Anna kaufen. (token/type reading)
'Anna wants to buy this car.'

b. *So ein Auto* will Anna kaufen.
'Anna wants to buy such a car.'

(6) (speaker pointing to a table for sale in a flea market):

a. *Diesen Tisch* will Anna kaufen. (token reading only)
'Anna wants to buy this table.'

b. *So einen Tisch* will Anna kaufen.
'Anna wants to buy such a table.'

Compare (5a) and (6a) :

- *Dieses Auto* ('this car') has a type reading regardless of context because there is a generally known well-established taxonomy of car-kinds.
- *Dieser Tisch* ('this table') doesn't have a type reading in a flea market context because there is no generally known well-established taxonomy of car-kinds (but there is, e.g., when shopping at Ikea).
- There is no such restriction in the case of *so*: (5b)/(6b) both mean that Anna will buy a car / table similar to the one the speaker points to.

→ *so* does not express identity to a previously given / well-established kind

→ *so* generate ad-hoc kinds independent of whether there is a previously established taxonomy or not.

dieses Auto – certain make of car (Mercedes Benz, Porsche, ...)

so ein Auto – Mercedes, Porsche, car with a rear door, car plastered with stickers etc.

4 Similarity demonstratives vs. similarity adjectives in German

Given that there are similarity demonstratives, how do these demonstratives relate to adjectives expressing similarity, like English *similar* and German *ähnlich* ('similar')?

Are similarity demonstratives and similarity adjectives equivalent in meaning, as suggested in (7)?¹

(7) (The speaker pointing to a dress in a shop window):

- a. Anna hat so ein Kleid / ein solches Kleid.
- b. Anna hat ein ähnliches Kleid.
'Anna has such a dress / a dress like this / a similar dress.'

There are various contexts where similarity demonstratives and similarity adjectives differ semantically, e.g.,

- uniqueness contexts,
- additive contexts,
- "second description contexts"

4.1 Lexical category

German *so* is a demonstrative expression

- has a genuine deictic use accompanied by a demonstration gesture
- the object of comparison is given by the demonstration gesture (cmp. 1)

German *ähnlich* is a relational adjective

- the object of comparison may be given by a dative NP or a *wie*-PP or by an antecedent, or by reciprocal construction, cf. (8)
- the antecedent may be given in the utterance situation (instead of the preceding text) and may be accompanied by a pointing gesture. However, this is not a genuine deictic usage, since the gesture need not be temporally aligned with the utterance.

- (8)
- a. Anna trägt ein dem von Berta ähnliches Kleid.
 - b. Anna trägt ein ähnliches Kleid wie Berta.
'Anna is wearing a dress similar to Berta's dress.'
 - c. Anna und Berta tragen (sich) ähnliche Kleider.
'Anna and Berta are wearing similar dresses.'
 - d. Berta trägt ein indisches Hippie Kleid. Anna trägt ein ähnliches Kleid.
'Berta is wearing an Indian hippie dress. Anna is wearing a similar dress.'

¹ German *so* in nominal phrases has a pre-determiner position like English *such* while the adjective *ähnlich* in German has a pre-nominal position. When comparing *so* and *ähnlich* in this paper word order is neglected. This is justified by the fact that German *solch* can take both positions and is equivalent in meaning to *so*, even if slightly old-fashioned.

Both *so* and *ähnlich* can occur in nominal phrases, verbal phrases, and adjectival phrases:

- (9) a. *so* ein Auto / *so* getanzt / *so* groß
'such a car, dance like that, tall like that'
- b. ein *ähnliches* Auto / *ähnlich* getanzt / *ähnlich* groß
'a similar car, dance similarly, be of similar height'

The adjectives *ähnlich* can be used in comparative form, which is impossible for *so*.

- (10) (Berta's dress is similar to the one Marilyn Monroe is wearing in 'Some like it hot'.)
- a. Anna hat ein noch *ähnlicheres* Kleid.
'Anna has an even more similar dress.'
- b. * Anna hat ein Kleid, das noch mehr *so* ist.
lit.: 'Anna has a dress that is even more such.'

4.2 Uniqueness contexts

The demonstrative *so* as well as the adjective *ähnlich* are in general reluctant to combine with definite articles (??? *so das Kleid* 'such the dress' / ?? *das ähnliche Kleid* 'the similar dress').

If uniqueness is enforced by lexical means the sentences are acceptable but differ substantially in meaning.

- (11) (The speaker points to a dress in a second hand shop window)
- a. Anna besitzt das einzige *solche* Kleid. (1 dress)
'Anna has the only such dress.'
- b. Anna besitzt das einzige *diesem da ähnliche* Kleid. (2 dresses)
'Anna has the only dress similar to this one.'

→ *so* allows for identity of the demonstration target and the referent,
ähnlich requires distinct referents.

Identity may be required by the context:

- (12) (The mayor expressed his gratitude towards the fire fighters. He said:)
- a. [...] Wir in der Gemeinde freuen uns, dass wir *so* eine Feuerwehr haben!"
- b. [...] Wir in der Gemeinde freuen uns, dass wir eine *ähnliche* Feuerwehr haben!"
'[...] We are happy to have such a / a similar fire brigade in our community. '

→ as before, *so* allows for identity and *ähnlich* requires distinct referents.

NB: How does *so eine Feuerwehr* in (11) differ from *diese Feuerwehr*??

4.3 Additive contexts

Contrastive topics

- (13) (Which cars do Otto and Anna own?)
Otto fährt einen Mercedes. 'Otto drives a Mercedes.'
- a. # Anna fährt einen Mercedes.
 - b. Anna fährt AUCH einen Mercedes.
'Anna drives a Mercedes, too.'
 - c. # Anna fährt so ein Auto.
 - d. Anna fährt AUCH so ein Auto.
'Anna drives such a car / such a car, too.'
 - e. Anna fährt ein ähnliches Auto.
 - f. # Anna fährt AUCH ein ähnliches Auto.
'Anna drives a similar car / a similar car, too.'

NP coordination

- (14) (What's going on in the courtyard?)
- a. # Im Hof steht ein Mercedes und ein Mercedes.
 - b. Im Hof steht ein Mercedes und NOCH ein Mercedes.
'There is a Mercedes in the courtyard and another Mercedes.'
 - c. # Im Hof steht ein Mercedes und so ein Auto.
 - d. Im Hof steht ein Mercedes und NOCH so ein Auto.
'There is a Mercedes in the courtyard and a car like this / another car like this.'
 - e. Im Hof sind ein Mercedes und ein ähnliches Auto.
 - f. # Im Hof sind ein Mercedes und NOCH ein ähnliches Auto.
'There is a Mercedes in the courtyard and a similar car / another similar car.'

The *so* versions and the *ähnlich* versions in (13) and (14) show a mirror-inverted behavior:

- In the *so* versions additive particles are required, and in the *ähnlich* versions additive particles are blocked.

Following Eckardt (2012) additive particles are required to mark distinctiveness of individuals, events, etc. which would otherwise appear to be identical. This suggests an explanation of the findings for additive contexts confirming the finding in 2.2

- In the case of *so* additive particles are required because *so*-phrases allows for identity of the object of comparison and the referent
- In the case of *ähnlich* additive particles are blocked because *ähnlich* -phrases disallows identity of the object of comparison and the referent

NB. The distinctiveness requirement imposed by *ähnlich* is implemented by adding a constraint to the similarity relation such that it is irreflexive.

4.4 Second description contexts

(15) (The prime minister received a Panda bear from the Chinese government.)

a. So ein Geschenk zeigt die Wertschätzung des Gasts.

b. # Ein ähnliches Geschenk zeigt die Wertschätzung des Gasts.

'Such a present / a similar present demonstrates the esteem for the guest.'

c. Ein ähnliches Geschenk brachte ihm im Vorjahr die Kritik der Tierschützer ein.

'A similar present evoked protests by animal right activists last year.'

→ The *so*-phrase in (15) has a generic reading, supporting the interpretation as ad-hoc kinds.

Ähnlich phrases never allow for a generic reading. (why?)

→ In the case of *so*, the features of comparison are provided by the noun,
In the case of *ähnlich*, the features of comparison are provided by the antecedent.

5 Cross-linguistic findings

Hypothesis:

Similarity demonstratives are a cross-linguistically relevant category of demonstratives

The findings up to now are promising, cf. table 1.

6 Conclusion

- There is a class of demonstratives – similarity demonstratives – that differ from regular (identity) demonstratives in expressing similarity (instead of identity) between the target of the demonstration gesture and the referent of the demonstrative phrase.

The class of similarity demonstratives is relevant across languages.

- Identity demonstratives may refer to kinds instead of individuals (types instead of token) if these kinds are "well-established"; (but see the Polish data)

Similarity demonstratives generate ad-hoc kinds.

- Similarity as expressed by similarity demonstratives is an equivalence relation (symmetric, transitive, reflexive).

Similarity as expressed by adjectives requires distinctness of the object of comparison and the referent of the NP, and is thus irreflexive.

Future work:

- Explore contrasts between similarity demonstratives and identity adjectives.
- Include ad-verbal and ad-adjectival occurrences of similarity demonstratives.

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