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) 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**

1. summary of the analysis in Umbach & Gust (2014)
2. similarity demonstratives vs. identity demonstratives in German
3. similarity demonstratives vs. similarity adjectives in German
4. 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

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

\[ \text{similarity as used in the interpretation of the demonstrative so is an equivalence relation – symmetric, transitive, reflexive.} \]

(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"

(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)?

(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.'

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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 this, 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.
      'Anna has the only such dress.'

   b. Anna besitzt das einzige diesem da ähnliche Kleid.
      '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.
   'Anna drives a Mercedes, too.'

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.
   'There is a Mercedes in the courtyard and another 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 ähnlicher versions in (13) and (14) show a mirror-inverted behavior:

- In the so versions additive particles are required, and in the ähnlicher 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 ähnlicher additive particles are blocked because ähnlicher -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.

References

Anderson, Curt & Marcin Morzycki (to appear) Degrees as Kinds.