A bridge to definiteness: What bridging can tell us about definite expressions

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1 Introduction

- Definiteness is difficult to define
  - 'definite determiner' morphosyntactically maps onto the determiner *the* in English
  - *the* as encoding uniqueness, familiarity, and more (Coppock and Beaver 2015; Heim 1983; Roberts 2003; Schwarz 2009; Wespel 2008; a.o.), which overlap with *a*, *that*, and *this*
  - cross-linguistic variation
- Strategy in our paper: **bridging**
  - **bridging:** the phenomenon of a definite expression being licensed despite not having its referent introduced in the given context
  - Without a clear referent, speakers can use different strategies to resolve it for a coherent discourse
    - ∗ constrained by general pragmatic principles as well as lexical meanings of the bridged words (Asher and Lascarides 1998; Matsui 1995)

(1) I attended a talk yesterday. **The speaker** talked about bridging.
  a. unique existence of *speaker* in the situation
  b. one-to-one relation to an entity introduced there (*the talk*)

    - ∗ The second sentence out of the blue would be degraded

Bridging refers to the range of links that can be drawn between
the referent of a definite description and some property of the context.

  - Different bridges can be built depending on the different relations linking the previous discourse and the entity denoted by the definite expression.

(2) a. John's hands were freezing as he was driving down the street.
The steering wheel was bitterly cold and he had forgotten his gloves.[part-whole]
  b. John bought a book. **The author** is French. [producer-product]
[Schwarz 2009:11]

  - by manipulating the 'bridges', we can determine which semantic mechanism licenses the definite expression.

- Our focus: Mandarin definite nouns
  - Mandarin lacks an overt definite article and can use bare nouns and demonstrative descriptions in definite contexts (Cheng and Sybesma 1999; Jiang 2012)
  - Debate on how Mandarin divides the semantic space (Bremmers et al. 2022; Cheng and Sybesma 1999; Dayal 2004; Dayal and Jiang 2021; Jenks 2018,a.o.)

[1] [Based on our NALS manuscript (under review)]

2 Background: Bridging and Mandarin

2.1 Classic notion of bridging

- 'bridging': any phenomenon where two chunks of the discourse are linked to each other via some contextual information
(Asher and Lascarides 1998; Hobbs 1979; Matsui 1995; Sperber and Wilson 1986; a.o.)

- Clark (1975): any mechanism that relates some expression like a definite description, a pronoun, or an epithet to its antecedent:

  – direct link; identity: (not 'bridging' under our use)

  (3) I met a man yesterday. {The man, He, The bastard} told me a story. [p.170]

  – indirect links:

  (4) a. I met two people yesterday. **The woman** told me a story. [set membership]
  b. I trucked the goods to New York. **The truck** was full. [necessary roles]
  c. John went walking at noon. **The park** was beautiful. [optional roles]

- Our focus: a narrower view of bridging confined to definite expressions

2.2 Two kinds of definiteness and bridging

- Schwarz (2009): unique vs. familiar definites

(5) a. $[\![\text{the}_W]\!] = \lambda s_r.\lambda P\text{: } \exists!x(P(x)(s_r)).\ \iota x[P(x)(s_r)]$
b. $[\![\text{the}_S]\!] = \lambda s_r.\lambda P.\lambda y\text{: } \exists!x(P(x)(s_r)\ \&\ x = y).\ \iota x[P(x)(s_r)\ \&\ x = y]$

- The unique vs. familiarity distinction in bridging (Schwarz (2009)):

  – **Part-whole bridging** based on situational uniqueness

  (6) Jane was driving down the street. The steering wheel was cold.

  – **Producer-product bridging** based on anaphora and relational noun

  (7) Jake bought a book today. The author is French.
  a. author(x,y)

- Part-whole and producer-product bridging grammatically distinguished:

(8) *Der Kühlschrank war so groß, dass der Kürbis problemlos* ***{im*** */ #in*
The fridge was so big that the pumpkin without a problem **in-the$_{\text{weak}}$** / in
dem} ***Gemüsefach*** *untergebracht werden konnte.*
the$_{\text{strong}}$ **crisper** stowed be could
'The fridge was so big that the pumpkin could easily be stowed in **the crisper**.'

(9) *Hans entdeckte in der Bibliothek einen Roman über den Hudson. Dabei*
Hans discovered in the library a novel about the Hudson. In the process
fiel ihm ein, dass er vor langer Zeit einmal einen Vortrag {#vom /
remembered he$_{\text{Dat}}$ PART that he a long time ago once a lecture {by-the$_{\text{weak}}$ /
von dem} ***Autor*** *besucht hatte.*
by the$_{\text{strong}}$} **author** attended had.
'Hans discovered a novel about the Hudson in the library. In the process, he remembered that he had attended a lecture by **the author** a long time ago.'

- Deriving bridged meanings:
  - part-whole bridging: same as (5a) with some specification on what the relevant situation is
  - producer-product bridging: (5b) needs to be modified so that a) it takes a relational noun and b) x is not identified with the index argument but holds some relation to it.

(10) a. $[\![\text{the}_S]\!] = \lambda s_r.\lambda P.\lambda y.\ \exists!x(P(x)(s_r)\ \&\ x = y).\ \iota x[P(x)(s_r)\ \&\ x = y]$
b. $[\![\text{the}_{S;<s,<<e,est>,<e,e>>>}]\!] = \lambda s_r.\lambda R.\lambda z.\iota x[R(y)(x)(s_r)\&y = z]$ [Relational]

2.3 Mandarin demonstratives and bridging

- Mandarin: no obvious counterpart to *the*; bare nouns and demonstrative descriptions used instead

(11) a. ***gou*** *yao guo malu.*
dog want cross road
'The dog wants to cross the road.'
b. ***na tiao gou*** *yao guo malu.*
that CL dog want cross road
'That dog wants to cross the road.'

- Debates on how Mandarin bare nouns and demonstratives divide up the definite space

2.3.1 Jenks 2018

- bare nouns in Mandarin = unique definites
demonstrative descriptions in Mandarin = anaphoric definites

- Bare nouns licensed in uniqueness-based contexts:

(12) ***yueliang*** *sheng shang lai le.*
moon rise up come ASP
'**The moon** has risen.' [Jenks 2018:507; originally Chen 2004:1165]

(13) *Hufei he wan le* ***tang****.*
Hufei drink finish ASP soup
'Hufei finished **the soup**.' [Jenks 2018:504; originally Cheng and Sybesma 1999:510]

- Bare nouns licensed in part-whole bridging:

(14) *chezi bei jingcha lanjie le yinwei mei you tiezhi zai* ***paizhao*** *shang.*
car PASS police intercept ASP because NEG have sticker at license.plate on
'The car was intercepted by the police because there wasn't a sticker on **the license plate**.'
[Jenks 2018:508]

- Anaphoric uses of bare nouns more restricted:

(15) *jiaoshi li zuo-zhe yi ge nansheng he yi ge nusheng. wo zuotian yudao*
classroom inside sit-PROG one CL boy and one CL girl I yesterday meet
#(na ge) nansheng.
that CL boy
'There are a boy and a girl sitting in the classroom. I met **the boy** yesterday.'
[Jenks 2018:510]

- Analysis:
  - definite interpretation of bare noun: a covert typeshifter ι

(16) $[\![\iota]\!] = \lambda s_r.\lambda P_{<e,st>} : \exists! x[P(x)(s_r)].\iota x[P(x)(s_r)]$

  - *na* projects a syntactic DP

(17) $[\![\iota^x]\!] = \lambda s_r.\lambda P_{<e,st>}.\lambda Q_{<e,t>} : \exists! x[P(x)(s_r) \wedge Q(x)].\iota x[P(x)(s_r)]$
  a. Q: an $< e, t >$ predicate for domain restriction
  b. Q different from index in (5b):
    (i) can be any individual-denoting element (names, pronouns) + PRED (Partee 1987)
    (ii) presuppositional

  - *Index!*: whenever anaphora is supported, use ι^x (explains #BN in (15))
    * specific implementation of *Maximize Presupposition!* (Heim 1991)
    * contested in the literature (Ahn 2019; Bremmers et al. 2022; Dayal and Jiang 2021; a.o.)

2.3.2 Dayal and Jiang 2021

- Empirical argument against Jenks 2018: Bare nouns can be used in anaphoric contexts
- Analysis:
  - Mandarin BN = English definite descriptions
    Mandarin *na* = English *that* = DEM
  - DEM carries an anti-uniqueness presupposition

(18) $[\![\text{Dem}]\!] = \lambda s\ \lambda P{:}\ \exists s'\ s \leq s'\ |P_{s'}| > 1.\ \iota x\ [P_s(s) \wedge x{=}y]$ [Dayal and Jiang 2021]

- Prediction: Unless there is a reason to 'extend' the minimal situation to include other entities, demonstratives are predicted to be degraded

(19) Mary bought a house.

a. The roof needed to be replaced.
b. #That roof needed to be replaced.

3 Study 1 and 2: Bridging in Mandarin

3.1 Identifying different types of bridging in Mandarin

- General scheme:

[antecedent sentence]	['bridged noun' ...]
context for bridging	contains bridged def. expression

3.1.1 Part-whole bridging

- contexts such that there is a unique entity that meets the denotation of the bridged noun in the situation established by the previous context

(20) *zixingche zai houyuan li, wo zhunbei qu ca yixia* ***na ge chezuo****.*
bike at backyard inside I plan go wipe once that CL seat
'The bike was in the backyard. I planned to wipe **that seat**.'

  - Other examples: house-roof, laptop-screen, car-brake, horse-forehead, cat-tail*

3.1.2 Relational bridging

- Producer product bridging (Schwarz 2009): the entity denoted by the antecedent noun (e.g. 'a book') is *produced* by the entity denoted by the definite expression (e.g. 'the author')
  - Our relational bridging: broadening to all relational nouns that require the presence of an antecedent conceptually
- avoided cases where the referent of the bridged noun was physically *contained* inside the situation established by the antecedent sentence (to tease apart unique vs. relational)

(21) *zuotian wo mai le shu. wo hen xiang jianjian* ***na wei zuozhe****.*
yesterday I buy ASP book I very want meet that CL author
'Yesterday I bought a book. I really want to meet **that author**.'

  - lock-key, account-password, TV-remote, phone-charger, painting-painter, film-director
- Identifying relational nouns vs. sortal nouns (Barker 2011; Löbner 1985; a.o.)
  - syntactic diagnostic: preposition *of*

(22) a. child of someone
b. person (*of someone)

  - semantic diagnostic: defined by a specific entity they are related to; Barker 2011: 'a day counts as a birthday only in virtue of standing in a certain relationship to a person' (p.3)
- Diagnostics for Mandarin relational nouns:
  - possessive *de*

(23) a. *mou-ren de haizi*
some-person DE child
'child of someone'

b. ?*mou-ren de ren*
some-person DE person
Intended: 'person of someone'

∗ But *de* also serves as a regular possessive marker:

(24) *mou-ren de hua*
some-person DE flower
'flower of someone'

– Relied on both syntactic (*de*) and semantic cues

∗ a key passes the *de*-test (*suo de yaoshi* 'key of a lock') and semantically is defined in virtue of standing in some relation to a lock

3.2 Study 1: Sentence Ratings Task

3.2.1 Methodology

- independent variables:
  - **bridging type** (part-whole vs. relational)

(25) a. Part-whole (antecedent, anaphor):
(i) Inanimate: (car, brake), (house, roof), (bike, seat), (laptop, screen);
(ii) Animate: (horse, forehead), (dog, nose), (shark, mouth), (cat, tail)
b. Relational (antecedent, anaphor):
(i) I: (lock, key), (account, password), (TV, remote), (phone, charger);
(ii) A: (book, author), (painting, painter), (film, director), (presentation, speaker)

  - **bridged noun type** (bare noun vs. demonstrative)

(26) a. *che*
car
'car' (BN)

b. *na liang che*
that CL car
'that car' (DEM)

c. *yi liang che*
one CL car
'one car' (INDEF)

- dependent variable: rating on a 7-point Likert scale
- also varied on: antecedent noun type (BN, DEM, INDEF), syntactic position (subject vs. object)
- Sample test sentences:
  - [part-whole, BN]

(27) ***zixingche*** *zai houyuan li, wo zhunbei qu ca yixia* ***chezuo.***
bike at backyard inside I plan go wipe once seat
'The bike was in the backyard. I planned to wipe the seat.'

  - [relational, DEM]

(28) ***yi bu shouji*** *mashang jiuyao meidian le, dan* ***na ge chongdianqi***
one CL phone soon will no.battery ASP but that CL charger
qiahao huai le.
happen.to break ASP
'**A phone** is running out of battery, but **that charger** happens to be broken.'

- Instruction language:
  - methods used in an experiment such as the instruction and the response scale have a considerable impact on the results (Kirk 2012; Myers 2017; Schütze 2005; Sprouse et al. 2013)
  - Zhu and Ahn 2023: the term 'natural' (*ziran* ('natural')) maximizes the rating difference between semantically and pragmatically odd sentences in both English and Mandarin

(29) *qing gei juzi de ziran chengdu dafen. 1 fen wei zui bu ziran, 7*
please give sentence DE natural degree rate 1 point be most not natural 7
fen wei zui ziran.
point be most natural
'Please rate the naturalness of the sentence(s). 1 means least natural, and 7 means most natural.'

- Controls: to form a standard for cross-linguistic comparison
  - ≠ languages, ≠ ranges of response ⇒ impossible to directly compare across languages
  - Control stimuli: 8 'semantically-odd' sentences; 8 'pragmatically-odd' sentences; 8 'neutral' sentences

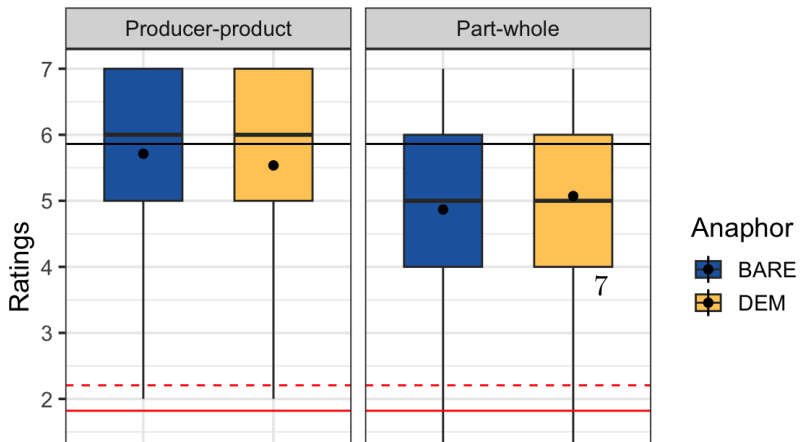
(30) a. *Zhang Xiaoming shi ge jie-le-hun-de danshenhan, wo he ta hen shu.*
Zhang Xiaoming be CL married bachelor I and he very close
'Zhang Xiaoming is a married bachelor. He and I are very close.' [semantically odd]

b. *zuotian xiayu de shihou xiayu le.*
yesterday rain DE time rain ASP
'Yesterday it was raining when it was raining.' [pragmatically odd]

c. *Xiaoxue zhengli hao keben, jueding jintian qu-shangxue.*
Xiaoxue organize complete textbook decide today go.to.school.
'Xiaoxue organized the textbooks and decided to go to school today.' [neutral]

- 120 native Mandarin speakers (18–64; gender-balanced) via Prolific
- directed to a study designed in PCIbex (Zehr and Schwarz 2018)

3.2.2 Results

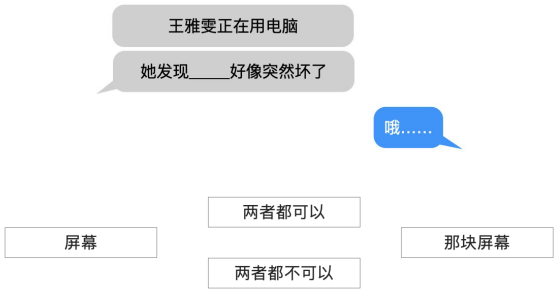


- Main effect of **bridging type** ($p < 0.05$)
- No significant effect of BN vs. DEM
  - p-w lowered due to animate stimuli
  - all target sentences $>^*$ semantically/pragmatically odd controls
  - black line: neutral
  - dotted red: pragmatically odd
  - solid red: semantically odd

Bare nouns and demonstratives in Mandarin allow both part-whole and relational bridging

3.3 Study 2: Production study

- Short message exchange context (Dillon 2023)
  - (i) a background sentence that provided the linguistic context
  - (ii) a test sentence with a blank to be filled by a nominal
  - (iii) a semantically uninformative reply (*oh*)



'Wang Yawen is using the computer.'
'She found that ___ seemed to have broken all of a sudden.'

'Oh...'

[both acceptable]
[screen] [that screen]
[both unacceptable]

(31) Wang Yawen is using the computer.

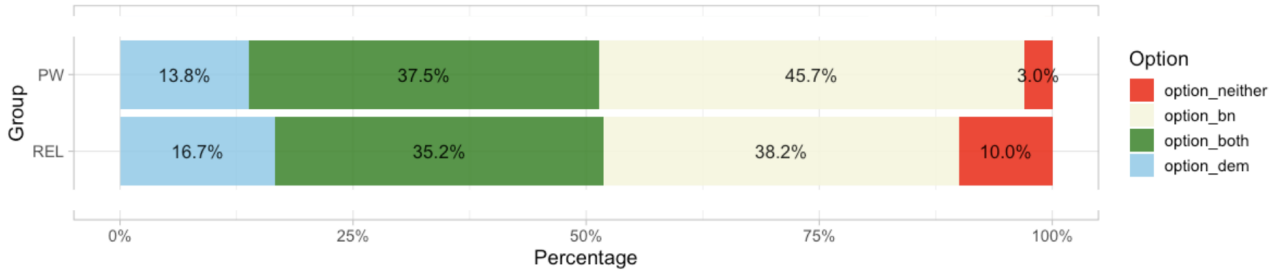
a. *pingmu* 'screen'
na kuai pingmu 'that screen' [part-whole]

b. *chongdianqi* 'charger'
na kuai chongdianqi 'that charger' [relational]

c. *liangzhe dou keyi* 'both forms are acceptable'
liangzhe dou bu keyi 'both forms are unacceptable'

- 24 target items; antecedent noun present in the background; bridged noun in the options
- bridging type (part-whole vs. relational) varied by manipulating the noun in the options

3.3.1 Results

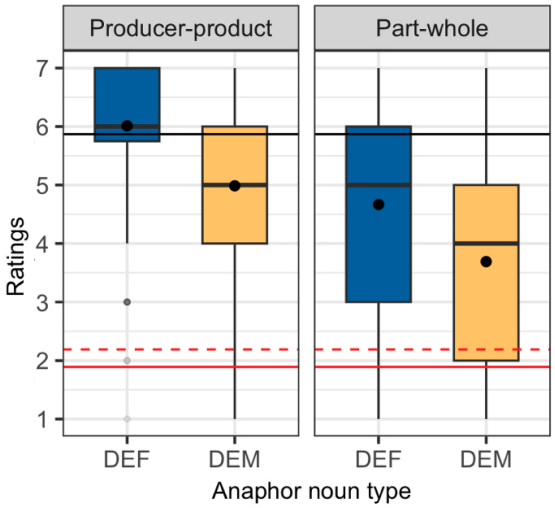


- BN: 83.2% for part-whole bridging and 73.4% for relational bridging
- DEM: 51.3% for part-whole bridging and 51.9% for relational bridging

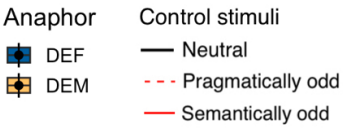
1. Participants' acceptance of DEM did not significantly vary based on bridging type
2. Participants significantly more likely to accept BN in part-whole than in relational bridging

4 Comparison: Study 3 English Sentence Ratings Task

(32) a. **The bike** is in the backyard. I'm planning to clean **the seat**.
b. **The phone** is running out of battery, but **that charger** happens to be broken.



[DEF antecedent only]



- main effect of **bridged noun type** ($p < 0.001$), **bridging type** ($p < 0.01$)

English dem rated significantly lower than Def in both part-whole and relational bridging

5 Proposal

- Empirical picture:

1. Mandarin bare nouns allow both part-whole and relational bridging
2. Mandarin demonstrative *na* allows both part-whole and relational bridging
3. There is a preference for bare nouns over demonstratives in part-whole bridging
4. Mandarin *na* differs from English *that* in allowing bridging more readily.

- Existing analyses:
  - Dayal and Jiang 2021 doesn't account for the data
    - *na* ≠ *that*
    - *na* licensed in contexts that do not meet the anti-uniqueness presupposition
  - Jenks 2018 doesn't account for the data
    - *Index!* predicts complementary distribution between bare nouns and demonstratives
    - *both* BN and DEM are both allowed in *both* part-whole and relational bridging

5.1 A new analysis of Mandarin definite expressions

- Jenks 2018 as our starting point

(33) a. $[\![\iota]\!] = \lambda s_r.\lambda P_{<e,st>} : \exists!x[P(x)(s_r)].\iota x[P(x)(s_r)]$
b. $[\![\iota^x]\!] = \lambda s_r.\lambda P_{<e,st>}.\lambda Q_{<e,t>} : \exists!x[P(x)(s_r) \wedge Q(x)].\iota x[P(x)(s_r)]$

- Assumptions we adopt:
  - Mandarin nouns are cumulative predicates that contain both individuals and pluralities closed under sum (Link 1983; Schwarzschild 1996)
  - classifiers take these as arguments and return atomic predicates (Chierchia 1998b), represented as *AT*

(34) a. $[\![\text{N}]\!] = \lambda x\lambda s.P(x)(s)$
b. $[\![\text{CL}]\!] = \lambda P\lambda x\lambda s.P(x)(s) \wedge AT(x)$ [adopted from Jenks 2018:513]

- Divergence 1: removal of the *Index!* principle
- Divergence 2: modification of the denotation of the anaphoric definite in (33b)
  - $Q(x)$: directly anaphoric
  - What we need: a bridging use
  - We replace Q with **a genitive relation**, whose content is contextually determined
    - possession relations for sortal nouns (Barker 2011; Vikner and Jensen 2002; a.o.)

(35) $\pi = \lambda P\lambda x\lambda y.P(y) \wedge R(x,y)$ [Barker 2011:1114]
a. R: a free (pragmatically controlled) variable for a possession relation

- Proposal: build the denotation of this relationalizer (specifically π) to the meaning of *na* to make it a relationalizing operator as in (36)

(36) $[\![\text{na}]\!] = \lambda s_r.\lambda P_{<e,st>}.\lambda z : \iota x[\pi(P)(z)(x)(s_r)]$
$= \lambda s_r.\lambda P_{<e,st>}.\lambda z : \iota x[P(x)(s_r) \wedge R(z,x)(s_r)]$
a. 'the unique entity x that is P in s_r and stands in some relation R with z in s_r'
b. R: a generic 'related-to' predicate or a free variable for some (possession) relation [Vikner and Jensen 2002, Barker 2011]

5.2 Deriving the data

5.2.1 *na* in relational bridging

- all of our relational stimuli involved relational nouns $R(x)(y)$, but *na* takes a non-relational noun
  - Detransitivizing type-shifter *Ex*

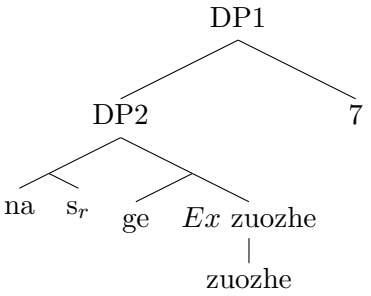
(37) $Ex = \lambda R \lambda x \exists y R(y, x)$ [Barker 2011:1114]

∗ *Ex* argued to be readily available for relational nouns a) without overt possessors or b) interpreted non-lexically

(38) a. Which brother are you going to interview? [Ex(brother)]
b. Jin's brother seemed very excited for the interview. [$\pi(Ex$(brother))]
c. Molly Weasley is my favorite mother. [favorite(Ex(mother))]

∗ *Ex* is freely available to detransitivze the noun before it combines with *na*

(39)



(40) $[\![\text{zuozhe}]\!]^g = \lambda z \lambda x \lambda s.author(z, x)(s)$
$[\![Ex \text{ zuozhe}]\!]^g = \lambda x \lambda s. \exists y.author(y, x)(s)$
$[\![\text{ge } Ex \text{ zuozhe}]\!]^g = \lambda x \lambda s. \exists y.author(y, x)(s) \wedge AT(x)$
$[\![\text{DP2}]\!]^g = \lambda z. \iota x[\exists y.author(y, x)(s_r) \wedge AT(x) \wedge R(z, x)(s_r)]$
$[\![\text{DP1}]\!]^g = \iota x[\exists y.author(y, x)(s_r) \wedge AT(x) \wedge R(g(7), x)(s_r)]$

- If interpreted lexically, R: author-book; the author of the book $g(7)$
- If interpreted pragmatically, the x s.t. x is an author and stands in some relation to $g(7)$

→ **Prediction:** *na* should be able to take a non-relational noun as its argument and turn it into a pragmatically-relational noun that stands in some relation to the index argument z → Study 4

5.2.2 *na* in part-whole bridging

- same denotation as in (36) but z can be an index for not only individuals but also locations

(41) a. $[\![\text{that}_7]\!]^g = \text{g}(7)$ entity at 7
b. $[\![\text{there}_7]\!]^g = \text{g}(7)$ location at 7

- For the *bike-seat* pair:

(42) $[\![\text{na ge chezuo 7}]\!]^g = \iota x[seat(x)(s_r) \wedge AT(x) \wedge R(g(7), x)(s_r)]$

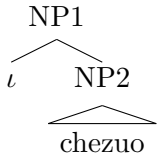
a. $g(7)$: location of the bike
b. R: located-at

– *na ge chezuo* ('that seat') returns the unique x that is a seat in s_r and stands in some relation to the location picked up by the index z in the previous discourse 'the bike there'

5.2.3 bare nouns in part-whole bridging

- straightforwardly accounted for using the same logic in Jenks 2018
  - ι typeshifts the predicative noun into an individual-denoting entity by feeding it a situation variable and returning the unique entity that meets the noun denotation
  - The situation can be bound by the topic situation, which in turn can be fixed to the relevant question under discussion (Schwarz 2009)

(43)



(44) $[\![\text{NP1}]\!]^g = [\![\iota \text{ chezuo}]\!]^g = \iota x.seat(x)(s_r)$ 'the unique seat in the relevant situation'

5.2.4 bare nouns in relational bridging

- Schwarz 2009:
  - relational bridging involves anaphoricity because the strong definite introduces an index *outside* the complement noun (same position as the prenominal possessive)

(45) a. $[_{\text{DP}}\ 1\ [_{\text{D'}}\ \text{D NP}\ ]\ ]$
b. sein bruder: $[_{\text{DP}}$ sein $[_{\text{D'}}\ \varnothing$ bruder $]\ ]$
c. $[\![\text{the}_{S;<s,<<e,est>,<e,t>>>}]\!] = \lambda s_r \lambda R.\lambda z.\iota x[R(y)(x)(s_r)\&y = z]$

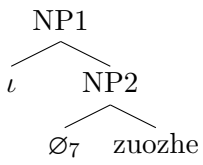
(46) a. $[[[\text{the}_S\ \text{s}_r]\ \text{author}\ ]\ 1\ ]$
b. $\iota x.\text{author}(x)(y)(s_r)\&y = g(1)$

  - if possessor overtly expressed inside the head noun as complement, you get the$_W$

- For Mandarin, we argue that the relatum argument can be a covert variable, thus providing an argument to the relational noun as its complement
  - possible in Mandarin because this language more readily allows argument drop than languages like English and German (Huang 1984; Liu 2014; a.o.)

- Once the noun itself contains a relatum argument as its complement, there is no need for an external index argument, thus licensing the bare noun

(47)



(48) $[\![\text{NP2}]\!]^g = [\lambda z \lambda x \lambda s.author(z,x)(s)](g(7))$
$[\![\text{NP1}]\!]^g = \iota x.author(g(7),x)(s_r)$

- Only possible if the noun itself carries a relatum argument inside its denotation
  - thus not needing *na* to host an external index

→ **Prediction:** relational bridging only possible for BN with lexically relational nouns

5.2.5 Prediction on non-relational nouns

- Together with the analysis for *na*, we predict that a non-lexically-relational noun would license bridging only with *na* and not with the bare noun

5.3 Study 4: Relational Ratings Task

5.3.1 Methodology

- 2×2 design
  - NOMINAL TYPE (bare nouns vs. demonstratives)
  - RELATIONALITY (relational vs. non-relational)
- target stimuli (24 sentences in total) evenly distributed in NOMINAL TYPE and RELATIONALITY

(49) *Wang Yawen xihuan shoucang tushu. ta mei-ci zhao-dao le yi ben xihuan de*
Wang Yawen like collect book. she every-time find-arrive ASP one CL like DE
*xiaoshuo, zuihou dou hui faxian ziji du-guo {(na wei) **zuozhe**, (na wei)*
novel, finally always will discover self read-pass that CL author that CL
***xiaoshuo-jia**} xie de ling yi ge gushi.*
novel-person write DE another one CL story
'Wang Yawen likes to collect books. Every time she finds a novel that she likes, she eventually realizes that she has read another story written by **the author**/**the novelist**.'

- Coming up with relational vs. non-relational pairs: 2 strategies presented in Schwarz 2009
  1. minimal pairs of synonyms where one is relational and the other isn't: 'author' and 'novelist'
  2. compounding: if the relatum argument is overtly present and forms a compound with the relational noun, then the noun is no longer relational ('author' vs. 'fairytale-author')

Antecedent	Relational noun	Non-relational noun
novel	author	novelist
painting	creator	artist
solo concert	performer	musician
song	singer	jazz singer
literary work	author	fairy tale author
restaurant	owner	diner owner

(in English)

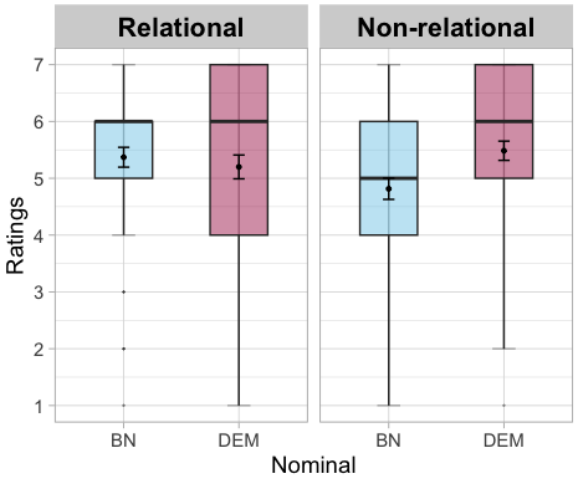
  - a small-scale norming study (n = 8), testing Mandarin *de*-constructions

(50) a. *na ben xiaoshuo de zuozhe*
that CL novel DE author
'the author of that novel' [relational avg: 4.88/5]

b. **na ben xiaoshuo de xiaoshuo-jia*
that CL novel DE novelist
'the novelist of that novel' [non-relational avg: 1.50/5]

- 100 native Mandarin speakers (age-balanced and gender-balanced) via Prolific
- side-by-side design (Marty et al. 2020; Bryant 2022)

5.3.2 Results



– main effect of **nominal type**($p < 0.001$)

– main effect of **relationality** ($p < 0.05$);
– significant interaction between **nominal type** and **relationality** ($p < 0.001$)
  * relational: BN ≈ DEM ($p = 0.732$)
  * nonrelational: BN ≠ * DEM ($p < 0.001$)

Relationality of nouns affect bridging of bare nouns

– lexically-related nouns: BN and DEM licensed
– non-relational nouns: DEM ✓; BN degraded

6 Summary and implications

6.1 Implications

– Unifying the two variants of the strong article in Schwarz 2009?
  * 'One question we have to ask in connection with the variant of the strong article in (309) is whether it is stipulative to simply propose two different meanings. Another, related, question is why there should be such a relational variant for the strong article but not for the weak article.' [Schwarz 2009:142]
– *na* is relational, but R can be that of identity, subsuming direct anaphora
  * similar to Clark 1975 where identity is assumed to be the shortest bridge that can be drawn between the antecedent and the referent of the bridged expression
– Could explain why English *that* does not allow bridging as readily
  * *that* requires direct anaphora unless relatum is overt (Ahn in press)

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