

Comparing reflexive and personal pronouns in Chinese locative prepositional phrases

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Abstract. In many languages, the complementarity captured by syntactic binding principles breaks down within locative prepositional phrases (LPPs), where both reflexive pronouns and personal pronouns can be coconstructed with a local subject. LPPs are therefore an ideal testing ground for non-syntactic factors influencing pronoun use. Focusing on Chinese, we experimentally tested the extent to which acceptability of reflexives *ziji* and *ta-ziji* and personal pronoun *ta* depends on two semantic factors: event type and spatial relation type. Findings reveal effects which follow the trend of those previously reported for English, but which affect different forms to different degrees. Along with advancing understanding of binding in LPPs, this work contributes to comparisons between *ziji* and *ta-ziji* and the typology of pronouns more broadly.

Keywords. semantics; experimental semantics; comparative semantics; binding theory; reflexivity; locative prepositional phrases; Chinese; typology

1. Introduction. In many languages, both reflexive pronouns and personal pronouns can be used to refer back to someone mentioned earlier in the sentence. Often times the choice between pronoun forms is entirely determined by syntactic binding conditions. We see this for instance in the English sentences in (1a), where Condition B rules out use of the personal pronoun *her* to refer to Michele, and (1b), where Condition A rather renders the reflexive *herself* ungrammatical.

- (1) a. Michele_i congratulated herself_i /*her_i.
- b. Michele_i's brother congratulated her_i /*herself_i.

However, in many languages, the kind of strict complementarity shown in (1) breaks down in locative prepositional phrases, or LPPs. We see this for instance in the English example in (2), where the reflexive and personal pronoun are both acceptable under the same interpretation.

- (2) Michele_i set a glass next to her_i /herself_i.

Following Reinhart & Reuland (1993), Büring (2005), and Bryant (2022b) and among many others, we assume that Conditions A and B are both satisfied in sentences such as (2), meaning both reflexives and personal pronouns are syntactically licensed. LPPs are therefore the ideal testing ground for factors outside of narrow syntax that help shape pronoun choice.

This paper focuses on two semantic factors: the **type of event** denoted by the clause containing the LPP—either motion or perception—and the **type of relation** denoted by the LPP itself—either contact or non-contact. Both factors have previously been shown to have a robust effect on pronoun choice in English LPPs. However, cross-linguistic research on LPP-internal pronouns remains limited, and it is an open question whether and to what extent similar effects are found in other languages.

In order to address this question, we investigated the effects of event type and relation type on LPP-internal pronouns in Chinese. Like English, Chinese allows reflexives and personal pro-

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nouns within LPPs to be co-construed with the sentence subject, as shown in (3). But unlike English, Chinese has two reflexive forms, simplex *ziji* and complex *ta-ziji*, in addition to a personal pronoun, *ta*.¹

- (3) Lijuan_i ba liang-pian sa dao ta_i/ziji_i/ta-ziji_i shen shang
 Lijuan BA glitter pour to her/self/herself body on
 ‘Lijuan_i poured glitter on her_i/herself_i.’

We tested the relative acceptability of *ta*, *ziji*, and *ta-ziji* in sentences such as (3) in a joint presentation acceptability judgment experiment. Findings reveal effects of event type and relation type which follow the general trend of those observed in English, but which affect different pronoun forms to different degrees. Along with advancing understanding of binding in LPPs, this work contributes to a growing literature on differences between *ziji* and *ta-ziji* and the typology of pronouns more broadly.

Section 2 introduces the effects of event type and relation type in English, which serves as the empirical starting point our investigation of Chinese. Section 3 introduces *ta*, *ziji*, and *ta-ziji* in more detail, setting up the central empirical questions driving this work. The acceptability judgment experiment is presented in Section 4, followed by discussion of the results in Section 5. Section 6 concludes.

2. Event type and relation type in English. While it is the case that subject-oriented reflexives and personal pronouns are both generally allowed in English LPPs, it is not the case that both pronoun forms are equally favored. Judgments can vary widely from one sentence to the next, with a host of factors coming together to push preferences one way or another.

In their seminal work on English pronominalization, Lees & Klima (1963) observe that pronoun choice within LPPs may depend on the nature of the meaning relation between the LPP and its host clause, which in turn depends on the type of event the clause denotes, illustrating with the minimal pair in (4) (see also Wilkins 1988; Hestvik 1991).

- (4) a. The men_i threw a smokescreen around themselves_i.
 b. The men_i found a smokescreen around them_i. [Lees & Klima 1963:(12)-(13)]

As stated in Bassel (2018, 2023), the descriptive split appears to be between sentences that express motion and those that do not. Based on examples like (4), we should expect reflexives to fare better in motion sentences than in non-motion sentences (all else being equal), while personal pronouns should fare better in non-motion sentences than in motion sentences.²

Event type alone does not determine which pronoun form will come out the winner in English LPPs. Kuno (1987) observes that preferences also depend on the spatial relation denoted by the LPP, in particular whether or not the relation involves direct contact between figure and ground. The effect of relation type is exemplified in (5), originally from Wechsler (1997) (see also van Hoek 1997; Strahan 2006; Lederer 2013).

- (5) a. Corporal Crump_i pinned the medal onto *him_i/himself_i.
 b. Corporal Crump_i pinned the medal beside him_i/*himself_i. [Wechsler 1997:(39)]

¹ In line with much previous work, we restrict our focus to third-person singular pronoun forms here.

² It may not be the case that appeal to motion provides the correct explanation for the contrast captured in (4): see Bryant (2022b) for discussion. In this paper, we use (non-)motion as a purely descriptive generalization, leaving open the question of what ultimately drives the event type effect in English and beyond.

Such examples suggest that reflexives should be most natural in LPPs that express direct contact between figure and ground (e.g., between Corporal Crump and the medal) while personal pronouns should be most natural in the expression of more distal relations.

The impact of event type and relation type on English LPP pronoun acceptability were experimentally confirmed in Bryant (2022a,b) in a joint-presentation sentence rating study. Results revealed robust effects that were largely symmetrical for reflexives and personal pronouns: the former were most natural in the expression of motion and contact, while the latter were most natural in the expression of non-motion and non-contact. Importantly, despite the suggestion of complementarity in some prior work (cf. (5)), neither factor was found to fully determine relative preferences. Rather, relative preferences were gradient across sentence conditions, and even when one form was reliably favored over the other, contrasts in acceptability were significantly less stark than those observed for sentences like (1a-b), where syntactic binding conditions render one form ungrammatical. The overall preference pattern turned up in Bryant (2022a,b) is captured in (6).³

- (6) a. Chloe_i poured some glitter on ??her_i / ✓ herself_i.
 b. Chloe_i poured some glitter on ?her_i / ?herself_i.
 c. Chloe_i noticed some glitter on ?her_i / ?herself_i.
 d. Chloe_i poured some glitter next to ✓ her_i / ??herself_i.

3. Chinese pronoun forms. With the English picture in place, we turn our attention to Chinese. As introduced in Section 1, Chinese has two reflexive pronoun forms, simplex *ziji* and complex *ta-ziji*, as well as a personal pronoun form, *ta*. Each of these forms is third-person singular and restricted to animate antecedents. Note that while *ta* and *ta-ziji* do not show a gender distinction in the spoken or transliterated forms, there is a feminine and masculine distinction in Chinese orthography.

Just as in English, Chinese reflexives and personal pronouns are in complementarity distribution in simple transitive sentences like (7a-b). In (7a), use of *ta* to refer to Lijuan is ruled out by Condition B, such that either *ziji* or *ta-ziji* must be used instead. In (7b), both reflexive forms are ruled out by Condition A, leaving *ta* as the only grammatical option.

- (7) a. Lijuan_i zhuhe ziji_i / ta-ziji_i / *ta_i
 Lijuan congratulate self/herself/her
 ‘Lijuan_i congratulated herself_i / *her_i.’
 b. Lijuan_i de ge-ge zhuhe ta_i / *ziji_i / *ta-ziji_i
 Lijuan DE brother congratulate her/self/herself
 ‘Lijuan_i’s brother congratulated her_i / *herself_i.’

Outside of configurations like (7), the distribution of reflexives and personal pronouns frequently overlaps. This is for instance the case in LPPs as shown in example (3) above, repeated in (8) below.

- (8) Lijuan_i ba liang-pian sa dao ta_i / ziji_i / ta-ziji_i shen shang
 Lijuan BA glitter pour to her/self/herself body on
 ‘Lijuan_i poured glitter on her_i / herself_i.’

³ Following Bryant (2022a), we use ‘✓’ to mark strongly favored forms, ‘??’ to mark strongly disfavored forms, and ‘?’ to mark forms for which judgements were more gradient across participants and items.

To the best of our knowledge, no prior work has investigated Chinese pronouns within LPPs. Our primary question therefore concerns the relative acceptability of reflexives and pronouns in Chinese LPPs. In particular, we ask whether the acceptability of *ta*, *ziji*, and *ta-ziji* in sentences like (8) displays a sensitivity to event type and relation type and, if so, how this sensitivity compares to the one reported for English.

Pursuit of this question also bears on a growing body of literature comparing simplex *ziji* with complex *ta-ziji* more broadly. As shown in (7a) above, both *ziji* and *ta-ziji* can be anteceded by a local subject. *Ziji* is also compatible with non-local antecedents, as shown in (9).⁴

- (9) Zhangsan_i renwei Lisi_j hai-le ziji_{i,j}
 Zhangsan think Lisi hurt-PFV self
 ‘Zhangsan_i thought that Lisi_j hurt himself_{i,j}.’ [Huang & Tang 1991:(1a)]

It has traditionally been assumed that *ta-ziji* requires a local antecedent (Tang 1989; Huang & Tang 1991; Cole et al. 1990). For instance, coconstrual with the sentence subject is reportedly unavailable for *ta-ziji* in (10).

- (10) Zhangsan_i renwei Lisi_j hai-le ta-ziji_{*i,j}
 Zhangsan think Lisi hurt-PFV himself
 ‘Zhangsan_i thought that Lisi_j hurt himself_{*i,j}.’ [Huang & Tang 1991:(1b)]

However, this view is challenged in Pan (1998, 2013) and Yu (1992, 1996), which show that *ta-ziji* is compatible with non-local antecedents if there is no intervening animate subject, as in (11).

- (11) Zhangsan_i shuo nabenshu hai-le ta-ziji_i
 Zhangsan said that-cl-book hurt-PFV himself
 ‘Zhangsan_i said that book hurt himself_i.’ [Pan 1998:(4)]

In fact, experimental work by Lyu & Kaiser (2023) shows that a non-local antecedent is also possible, and even preferred, across an animate intervener when coconstrual with the latter is ruled out by the semantics of the embedded verb. This is for instance the case in (12), where the verb *chui peng* ‘flatter’ biases towards an other-oriented reading, and the preferred referent of *ta-ziji* is the chairman rather than Director Li.

- (12) Hui-shang, dongshizhang_i zhuyi-dao Li zhuren_j yizhi chui peng ta-ziji_{i,j} de
 meeting-in chairman notice-ASP Li director consistently flatter himself DE
 guanli caineng.
 management skill
 ‘In the meeting, the chairman noticed that Director Li constantly flattered selfs management skills.’ [cf. Lyu & Kaiser 2023:(8)]

Nevertheless, contrasts like those between (9) and (10) suggest that *ta-ziji* may have a stronger locality bias than *ziji*. In line with this, Lu (2011) and Lyu & Kaiser (2023) report that *ta-ziji* is

⁴ The availability of non-local antecedents has been argued to depend on logophoricity, that is, antecedence by the perspectival center associated with the clause containing it (Huang & Liu 2001; Huang & Li 2009; Charnavel 2019; Liu 2022, a.o.). While we do not directly manipulate logophoricity in the present study, it is an important question whether logophoricity plays a role in licensing Chinese reflexives within LPPs. We leave it to future extensions of this work to explore this possibility.

less sensitive to discourse factors that can push *ziji* to favor non-local antecedents, including topic prominence and contextual plausibility.

Interestingly, however, *ta-ziji* has been shown to be preferred over *ziji* in some instances of non-local antecedence. Dillon et al. (2016) found that *ziji* was associated with lower naturalness ratings and longer reading times than *ta-ziji* in so-called sub-commanding configurations where the target antecedent is embedded within an inanimate local subject, as in (13).

- (13) Zhang_ita_i jingchang guanggu de na-ge shizhuangdian shang-ge-xingqi ba
 Zhang often visit DE that-CL boutique last-week BA
*ziji*_i/ta-*ziji*_i bu xiaoxin nongshangle.
 self/herself not careful harm

‘The boutique that Mrs. Zhang_i often visits carelessly harmed her_i last week.’

[Dillon et al. 2016:(7)]

Furthermore, Liu (2022) reports that *ta-ziji* is rated as ‘acceptable’ more often than *ziji* in sentences such as (14), where the non-local antecedent is introduced as the topic of the sentence in an initial paranthetical.

- (14) Shuodao XiaoLi_i, zhejianshi shanghai-le *ziji*_i/ta-*ziji*_i
 speak-of XiaoLi event hurt-PFV self/himself

‘Speaking of XiaoLi_i, this event hurt himself_i.’

[Liu 2022:(17b),(26b)]

In short, the relative acceptability of *ziji* and *ta-ziji* depends on the particular constructions in which they occur in ways that are not yet fully transparent. *Ta-ziji* displays a stronger locality bias in some cases, while *ziji* does in others. While we do not assume that LPP sentences such as (8) involve non-local antecedence, we may still find differences in the relative acceptability of LPP-internal *ziji* and *ta-ziji*. On the one hand, the reflexives are c-commanded by their antecedent, as is the case in non-local examples where *ziji* has the advantage. On the other, there is no animate intervener, like in examples (13)-(14) where *ta-ziji* is preferred. Investigating reflexives in LPPs can therefore help clarify the conditions favoring one reflexive form over the other.

4. Acceptability Judgment Experiment. The goal of this experiment was to test the relative acceptability of subject-oriented *ta*, *ziji*, and *ta-ziji* within LPPs. We were specifically interested in whether and to what extent acceptability depends on event type (motion / perception) and relation type (contact / non-contact).

4.1. STIMULI. 16 sets of target sentences were created by crossing event type, relation type, and pronoun form (*ziji* / *ta-ziji* / *ta*), resulting in 192 target sentences in total. One sentence set used in this experiment is shown in (15) below. Motion sentences all had the structure NP₁-ba-NP₂-V-PP while perception sentences all had the structure NP₁-V-NP₂-PP. Direct objects (NP₂, for instance *liang-pian* ‘glitter’ in (15)) were always inanimate, such that the sentence subject was the only possible sentence-internal antecedent.

- (15) a. *Motion/Contact*

Lijuan_i ba liang-pian sa dao ta_i/*ziji*_i/ta-*ziji*_i shen shang.

Lijuan BA glitter pour to her/self/herself body on

‘Lijuan_i poured glitter on her(self)_i.’

- b. *Motion/Non-Contact*
 Lijuan_i ba liang-pian sa dao ta_i/ziji_i/taziji_i shen pang.
 Lijuan BA glitter pour to her/self/herself body next
 ‘Lijuan_i poured glitter next to her(self)_i.’
- c. *Perception/Contact*
 Lijuan_i zhuyi-dao liang-pian zai ta_i/ziji_i/taziji_i shen shang.
 Lijuan noticed glitter at her/self/herself body on
 ‘Lijuan_i noticed glitter on her(self)_i.’
- d. *Perception/Non-Contact*
 Lijuan_i zhuyi-dao liang-pian zai ta_i/ziji_i/taziji_i shen pang.
 Lijuan notice glitter at her/self/herself body next
 ‘Lijuan_i noticed glitter next to her(self)_i.’

Sentences were designed to be as similar to their English counterparts as possible in order to allow comparison between the two languages. However, there are three ways in which the surface structure of the Chinese sentences included in this experiment diverged from the English sentences tested in Bryant (2022a,b), exemplified in (6) above.

First, the particle *ba* was included in motion sentences as its use was deemed most natural by the first author and additional native speaker consultants.

Second, all Chinese LPPs include a preposition (e.g., *dao* ‘to’ and *zai* ‘at’ in (15a-d)) as well as a postposition (e.g., *shang* ‘on’ and *pang* ‘next’). Following Wu (2015), we assume that the surface differences between Chinese and English arise from differences in head movement and that the underlying structures of the two languages are roughly equivalent.⁵

Third, in most sentences pronoun forms were followed by a body term, either *shen* ‘body’ (see (15)) or *tou* ‘head’. The Chinese possessive particle *de* was not used in order to minimize structural and interpretive differences between the Chinese stimuli and previously tested English sentences. Nevertheless, the difference in the complexity of the LPP complement could lead to differences in the relative acceptability of reflexives and pronouns in the two languages. We return to this point in Section 5.

As shown in the sample question in Figure 1, minimal triplets varying only in pronoun form were presented side-by-side. As in Bryant (2022a,b), joint presentation was used to help draw out relative preferences between pronoun forms and to help constrain interpretation of the personal pronoun *ta*. Each sentence appeared next to two-point acceptability rating scale, where ‘yes’ indicated that the sentence was acceptable and ‘no’ indicated that the sentence was unacceptable. Sentence triplets were preceded by a short supporting context intended to support consistent readings across participants. Contexts named only one person, the subject of the target sentences, to further ensure that personal pronouns were correctly interpreted as referring to the sentence subject rather than someone else in the discourse.

In addition to target sentences, we also tested four simple transitive control sentences, exemplified in (16a-b). In reflexive controls such as (16a), the sentence subject is the only possible antecedent for the direct object pronouns, and either *ziji* or *ta-ziji* must be used. In anti-reflexive controls such as (16b), the context introduces a second discourse referent that contrasts in gender

⁵ Wu (2015) builds on cartographic approaches to PP structure, including Svenonius (2008) and den Dikken (2010), among others.

李娟在做情人节装饰的时候把厨房弄脏了。 'Lijuan made a mess decorating for Valentine's Day in the kitchen.'		
	是 ('Yes')	不是 ('No')
李娟把闪片洒到她身上。 'Lijuan poured glitter on her (ta).'	☐	☐
李娟把闪片洒到自己身上。 'Lijuan poured glitter on herself (ziji).'	☐	☐
李娟把闪片洒到她自己身上。 'Lijuan poured glitter on herself (ta-ziji).'	☐	☐

Figure 1. Sample question from the acceptability judgment experiment. Survey materials were presented entirely in Chinese characters; English translations are included here for clarity.

with the sentence subject. Use of an other-oriented verb (here, *zhui* ‘chase’) and gender marking on *ta* and *ta-ziji*⁶ rule out reference to the sentence subject and, hence, rule out use of *ziji* and *ta-ziji*. Control sentences thus provided a baseline for (un)acceptability against which ratings for target sentences could be compared.

- (16) a. *Context: ‘Zhuli baked a sweet potato.’*
 Zhuli_i ba *ta_i/ziji_i/ta-ziji_i shao shang le
 Zhuli BA her/self/herself burn hurt PFV
 ‘Zhuli_i burned *her_i/herself_i.’
 b. *Context: ‘Liping played with her brother outside.’*
 Liping_i zhui ta_i/*ziji_i/*ta-ziji_i
 Liping chased him/self/himself
 ‘Liping_i chased him_i/*himself_i.’

4.2. RECRUITMENT AND PROCEDURE. 74 adult Chinese speakers were recruited online via Prolific Academic. 71 were self-reported native speakers of Mandarin, 2 were native speakers of Cantonese, and 1 was a native speaker of the Wu dialect. Participants were instructed that they would be comparing sentences with the same meaning by choosing whether each is something they would say in the context provided. Training trials demonstrated that more than one sentence could be endorsed with a ‘yes’ response per question. Following training, participants were randomly assigned to one of four question lists, each containing 16 target questions (1 per sentence set, 4 per condition) along with 4 control questions and 20 filler questions, randomly presented.

4.3. PREDICTIONS. We expect to see complementarity between reflexives and personal pronouns in control sentences, such that *ziji* and *ta-ziji* are judged as acceptable only in reflexive sentences while *ta* is judged as acceptable only in anti-reflexive sentences. If Chinese pronouns show a similar sensitivity to event type and relation type within LPPs as has been observed in English, we would expect reflexive forms *ziji* and *ta-ziji* to be judged as acceptable more often in motion

⁶ Recall from Section 3 that gender is marked on *ta* and *ta-ziji* in Chinese orthography.

sentences than in non-motion sentences and in contact sentences than in non-contact sentences, and we would expect the personal pronoun *ta* to show the opposite pattern.

4.4. RESULTS. Results for target and control sentences are shown in Figure 2. Data were analyzed in R using logistic mixed-effects models (lme4 package, Bates et al. 2015) with acceptability judgment (1 = ‘yes’) as the dependent variable and subject, item, and sentence set as random intercepts.

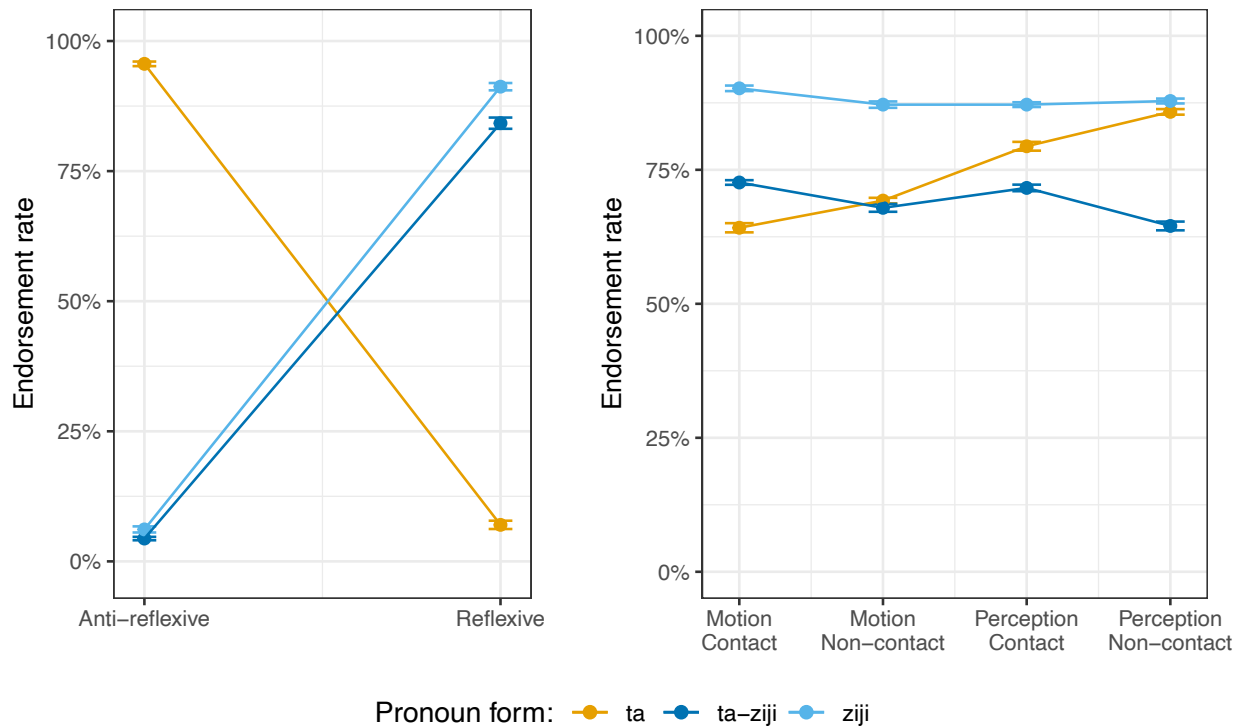


Figure 2. Rates of sentence endorsement (‘yes’ responses) by pronoun form across control conditions (left) and target conditions (right).

Starting with control sentences, we found very clear evidence of complementarity between reflexives and personal pronouns. There was no significant difference in endorsement rates (rates of ‘yes’ responses) between *ziji* and *ta-ziji* in reflexive controls ($\beta=0.74$, $p=0.18$), giving us confidence that participants were comfortable endorsing more than one pronoun form per question. Collapsing reflexive forms, we found that endorsement rates were significantly lower for *ta* than for *ziji* and *ta-ziji* in reflexive controls ($\beta=-5.45$, $p<0.001$), while they were significantly higher in anti-reflexive controls ($\beta=5.97$, $p<0.001$).

Turning to target sentences, we did not find evidence of complementarity between reflexives and personal pronouns in Chinese LPPs: endorsement rates were above 60% for all three pronoun forms across all four target conditions. This is in stark contrast to what was found in control sentences, where endorsement rates were less than 10% for disfavored forms.

We first ask to what extent endorsement rates for each pronoun form depended on event type and relation type. Endorsement rates for *ziji* did not significantly depend on event type ($\beta=-0.25$, $p=0.30$) or relation type ($\beta=-0.17$, $p=0.45$). Conversely, endorsement rates for *ta* depended significantly on both event type ($\beta=1.29$, $p<0.001$) and relation type ($\beta=0.44$, $p<0.01$). Specifically, endorsement rates for *ta* were higher in perception sentences than in motion sentences, and

they were higher in non-contact sentences than in contact sentences. Finally, endorsement rates for *ta-ziji* depended significantly on relation type ($\beta=-0.51$, $p<0.01$), with higher endorsement rates in contact sentence than in non-contact sentences, but did not depend on event type ($\beta=0.23$, $p=0.20$).

We next ask how endorsement rates compared across pronoun forms. Endorsement rates for *ziji* were high across target conditions, around 91%, on par with the endorsement rates observed for *ziji* in reflexive controls. Unlike in reflexive controls, endorsement rates were significantly higher for *ziji* than for *ta-ziji* in all four target conditions ($\beta=1.56$, $p<0.001$). Endorsement rates were also higher for *ziji* than for *ta* in all target conditions except perception/non-contact, where the difference between forms was not significant ($\beta=0.23$, $p=0.45$). Finally, while endorsement rates were significantly lower for *ta* than for *ta-ziji* in motion/contact sentences ($\beta=-0.52$, $p=0.01$), they were significantly higher in perception/non-contact sentences ($\beta=1.59$, $p<0.001$) and marginally higher in perception/contact sentences ($\beta=0.58$, $p=0.05$), and there was no difference between *ta* and *ta-ziji* in motion/non-contact sentences ($\beta=-0.08$, $p=0.70$).

5. Discussion. The overall high endorsement rates found for subject-oriented *ta*, *ziji*, and *ta-ziji* confirm that all three pronoun forms are syntactically licensed in Chinese LPPs. In fact, the relative preferences between forms captured in this experiment were never as strong as those turned up in prior work for English sentences such as (6a) and (6d), where speakers reliably favor the reflexive and personal pronoun, respectively. The relative weakness of the contrasts found in the present study could relate to the difference in LPP complement structure flagged in Section 4.1—that is, the use of an additional body term in Chinese LPPs. While the inclusion of the body term does not appear to affect the accessibility of the sentence subject as a suitable antecedent for LPP-internal reflexives, it may provide an additional locality buffer for LPP-internal personal pronouns.⁷ It could also be a product of the response method, as binary choice ratings are a less sensitive measure than the continuous sliding scales used in Bryant (2022a,b) on English LPPs (see Marty et al. 2020 for methods comparison). Of course, it is also possible that the differences that emerge between English and Chinese are rooted in the grammars of these two languages. More work is needed to tease these explanations apart.

Most importantly for our purposes, we found that relative preferences between LPP-internal pronouns in Chinese are shaped in part by event type and relation type. Unlike in English, the effects of event type and relation type in Chinese are form-specific. They are mainly apparent for the personal pronoun *ta*, endorsement of which was found to depend on both factors. In contrast, only relation type affects the acceptability of the complex reflexive *ta-ziji* while neither factor affects acceptability of the simplex reflexive *ziji*. Nevertheless, where effects of event type and relation type were found in Chinese, they ran in the same direction as they do in English. In particular, *ta* was accepted more often in perception and non-contact sentences than in motion and contact sentences, like English *her*, while *ta-ziji* was accepted more in contact sentences than in non-contact sentences, like English *herself*. This suggests that there is something universal about the way event type and relation type *can* shape LPP-internal pronoun acceptability, if they have an effect at all.

Our results also shed new light on the comparison between simplex *ziji* and complex *ta-ziji*. While both reflexive forms are generally acceptable in LPPs, *ta-ziji* appears to be more marked

⁷ This explanation depends on the assumption that the domain relevant for Condition B is more restricted than the domain relevant for Condition A. See, e.g., Büring (2005) and Hicks (2009) for proposals that this is the case.

than *ziji*, even in the absence of an animate intervener. Furthermore, only *ta-ziji* showed any sensitivity to the semantic factors tested here. Under the assumption that the sentences investigated in this study involve local binding of LPP-internal reflexives, this outcome suggests that *ziji* is the default local anaphor in Chinese, subject only to syntactic constraints, while use of *ta-ziji* may require additional semantic or pragmatic motivation.

6. Conclusion. The experiment presented in this paper expands the cross-linguistic view on pronoun use within LPPs, demonstrating that two semantic factors at play in English—event type and relation type—are also active in shaping pronoun acceptability in Chinese. On the one hand, our findings reveal variation in the extent to which these factors matter across and even within languages. On the other, they point to a possible universal in the role these factors can play. This study thus sets the stage for future work investigating the impact of semantic constraints on pronoun use cross-linguistically.

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