Acquisition of the blocking effect in L2 Chinese by L1 Japanese speakers

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Introduction This study investigates L1 Japanese speakers' processing of reflexive *ziji* ('self') in L2 Chinese in relation to the **blocking effect** (**BE**) phenomenon. In Chinese, the reflexive *ziji* can be long-distance (LD) bound by a non-local subject; however, when the local subject is a 1st-person pronoun, LD binding is not allowed (e.g., 'John$_1$ said I$_2$ like self$_{*1/2}$'s shirt'). This is because (i) LD *ziji* is empathic, requiring the speaker or reader to empathize with the non-local subject or ***empathy locus*** and (ii) the 1st-person pronoun 'I' is a **stronger empathy locus** and is priortized over a 3rd-person empathy locus (e.g., Kuno'87). These two factors lead native Chinese speakers to give a local reading to *ziji* when 'I' is the local subject.

In contrast, although Japanese bare reflexive *zibun* ('self') can also be bound non-locally, it does not seem to show BE in the absence of empathy-inducing morphemes (see e.g., Oshima'07). Indeed, in the absence of empathy-inducing morphemes, LD *zibun* tends to be used as a non-empathic, attitudinal reflexive (e.g., Nishigauchi'14), bound by an ***attitude holder***. Thus, Chinese *ziji* and Japanese *zibun* by default are construed differently: *ziji* is necessarily empathic and shows BE, while *zibun* tends to be non-empathic and does not show BE. Therefore, one challenge facing Japanese learners of L2 Chinese is to overcome transfering the properties of LD *zibun* to LD *ziji*. As these two reflexives share similar (although non-identical) properties, from a psychotypological perspective (e.g., Kellerman'83; Ringbom'02), the acquisition of BE in L2 Chinese may be highly challenging for Japanese learners as the perceived linguistic proximity may faciliate L1 transfer.

To preview our results, three picture-based truth value judgment experiments confirmed the claimed differences between *ziji* and *zibun* as the former shows strong BE while the latter tends to be construed as a non-empathic reflexive. Crucially, data from L2 learners suggest that despite the challenges, L2 Chinese learners can suppress L1 transfer and show similar BE in L2 Chinese.

Methods Thirty-two L2 Chinese learners, in addition to 33 L1 Chinese and 27 L1 Japanese control participants, participated in the study. Two factors, ANTECEDENT (local vs. non-local) and BLOCKER (blocker vs. non-blocker) were fully crossed in a 2x2 factorial design. See **Fig.1** for an example target set (16 target items and 24 fillers) and how local/non-local binding is created in blocker and non-blocker conditions. In the experiment, participants first made a forced choice acceptability judgment ('acceptable' or 'unacceptable') and then rated the acceptability of a particular construal (local or non-local) using a 7-point Likert scale. The L2 participants also completed two cloze tests and a language background survey.

Results Mixed effects logistic and linear regressions were run over forced choice judgments and acceptability ratings, respectively. We mainly report results from the forced choice task as acceptability ratings show similar results. In the **L1 Japanese** experiment (**Fig. 2**), we discovered an ANTECEDENT x BLOCKER interaction ($p < 0.001$): within the local conditions, participants accepted local binding more often in the presence of a blocker; within the non-local conditions, they accepted non-local binding more often in the absence of a blocker. Crucially, in the non-local/blocker condition, L1 Japanese speakers prefer non-local binding, which contrasts sharply with L1 Chinese speakers. In the **L1 Chinese** experiment (**Fig. 3**), in addition to an interaction ($p < 0.001$), we further found a strong BE as Chinese natives strongly reject non-local binding in the presence of a blocker. **L2 participants** (**Fig. 4**) showed interpretation patterns of *ziji* similar to L1 Chinese speakers as they also mostly rejected non-local binding when the local subject is 'I'. Taken together, these findings suggest that Japanese learners of L2 Chinese can acquire BE in the processing of *ziji*. (We omit the discussion of some minor aspects of our findings due to space.)

Discussion The main findings of this study are two-fold. First, consistent with prior theoretical discussions, we found different interpretation patterns of *ziji* and *zibun* (e.g., Oshima'07; Wang & Pan'15). Second, Japanese learners of L2 Chinese can suppress L1 transfer and show BE in L2 Chinese. Furthermore, the weak BE effect in L1 Japanese also provides new data relating to the linguistic properties of *zibun* (e.g., it can also be interpreted as empathic sometimes).

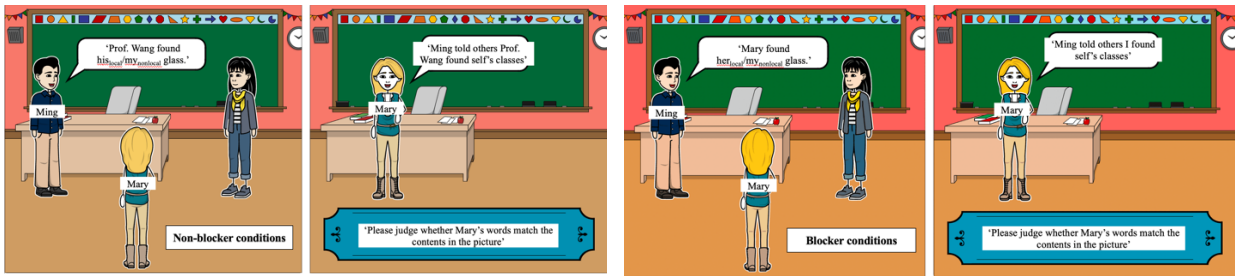

Fig. 1: An example target set with English translations. The left panel shows two **non-blocker** conditions (i.e., the local subject in Mary's speech is **3rd-person** 'Prof. Wang') with local or non-local antecedents. The right panel shows two **blocker** conditions (i.e., the local subject is **1st-person** 'I'). Local or non-local binding readings are contigent upon Ming's speech ('**his**' indicates **local** binding; '**my**' indicates **non-local** binding).

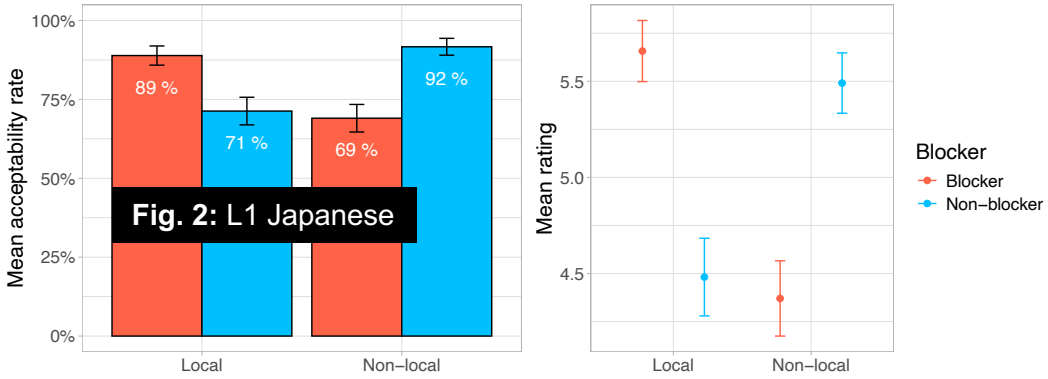

Fig. 2: L1 Japanese

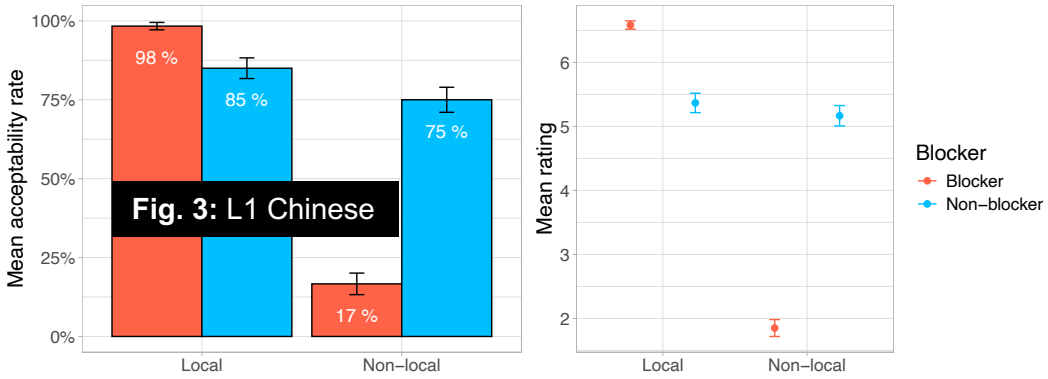

Fig. 3: L1 Chinese

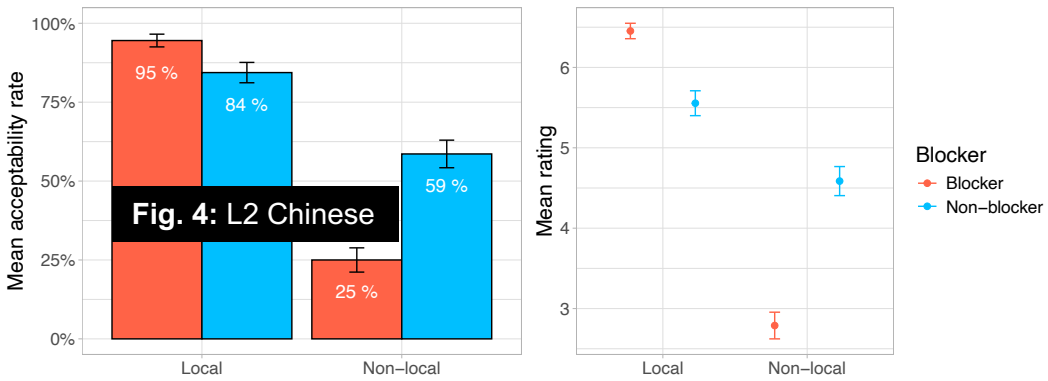

Fig. 4: L2 Chinese