

The Acquisition of Plurality in a Language Without Plurality
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Studies on English children have shown that by around age 3, children have acquired the plural. In this paper we investigate the question of how children arrive at plural interpretations in Mandarin Chinese, a language that doesn't mark the plural overtly except with a portmanteau morpheme *-men* that also marks definiteness. This situation is further complicated by the fact that definiteness itself is also not always marked, in that bare NPs can have definite interpretations. We show results from 2 experiments, one testing comprehension of bare NPs and NP+*men* in contexts of definite plurality, and the other testing comprehension of bare NPs and NP+*men* in contexts where either definiteness or genericity would be possible. Our results show that both the definiteness of *-men* phrases and their plurality is acquired quite late (7-10 years), and show a definite bias in contexts where a generic reading is highly salient. Furthermore from both adult and children data we show that bare nominals in Mandarin are much less definite than *-men* nominals supporting Partee's (2005) claims about definiteness in bare nominals in Mandarin.

Linguistic Analysis: Bare NPs in Mandarin are not marked for either plurality or definiteness. The morpheme *-men*, has been argued to be a plural morpheme (Li 1999). We analyse it instead as a plural classifier with an unvalued person feature, following Borer's (2005) insight that number morphology is classifier morphology. N+*men* heads raise to D and the DP denotes plurality as well as definiteness, e.g., *haizi-men* means 'the children' where *haizi* is 'child'.

Experiments: We conducted two experiments to examine the interpretation of *-men* phrases and bare nouns in terms of 1) *plurality* 2) *maximality* and 3) *genericity*. 76 Mandarin-speaking children (younger 3;10-4;11, older 5-6;11, and school-age 7-10;9), plus 20 adults were tested.

Exp. 1, we showed pictures of three people, two performing one activity (e.g. soccer) and the other a different activity (ping pong). Subjects were asked questions such as 'Is NP playing soccer' (Pl. condition) or 'Is NP playing ping pong?' (Sg. condition). Each question was asked using either a bare NP or an NP with *-men*. If children understand that *-men* is plural and definite, they should respond 'no' in both conditions. Results (below) show that while adults and school-age children understand both properties of *-men* phrases, preschool children have not yet mastered it. 3-4 year-olds don't have either property, while 5-6 year-olds partially distinguish singular from plural but do not have maximality.

Exp. 2 replicated in Mandarin Perez-Leroux et al.'s (2003) study on genericity in English and Spanish. Subjects heard stories containing three atypical members of a kind and one observer of another and were asked immediate and delayed questions about the atypical characters in terms of both canonical and non-canonical properties. Results (below) show that the younger children have a generic bias initially, replicating Perez-Leroux et al.'s results and don't differentiate between *-men* and bare NPs. Interestingly, bare NPs do not have a generic bias in adults and school-age children, showing instead a strong definite bias, despite the fact that the bare NP is the only way to express genericity in Mandarin.

Age	Experiment 1				Experiment 2			
	Percentage of 'no' responses				Percentage of generic responses			
	<i>men</i> -Sg.	<i>men</i> -Pl.	Bare-Sg.	Bare-Pl.	<i>men</i> -imm.	<i>men</i> -del.	Bare-imm.	Bare-del.
3-4	8%	8%	6%	4%	54%	60%	62%	58%
4-6	25.7%	6.4%	21.4%	5.7%	34.3%	35.7%	40%	32.9%
7-10	98.4%	82.8%	62.5%	68.8%	3.1%	0%	6.3%	6.3%
Adults	93.8%	76.3%	31.3%	32.5%	20%	17.5%	37.5%	27.5%

Overall, the results show that *-men* phrases present difficulty in acquisition for Mandarin young children, which not only allow non-exhaustive readings but also allow generic readings of *-men* NPs. These results for *-men* are similar to Perez-Leroux et al. who found that definites in English can receive generic readings by 3-5 year olds, thus providing support for the empirical observation that definiteness and genericity are related. For bare nominals, it is very clear that generic readings are not preferred in our experiment and that they allow non-exhaustive readings in non-generic contexts.

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