Does "Q-Spreading" Come with Presupposition Spreading?

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1. Introduction

The goal of this study is to introduce a new type of evidence to the debate on the nature of what is known in the literature as quantifier spreading (q-spreading), also referred to as the "symmetry error". Since the work of Inhelder and Piaget (1964), it has been known that until the age of 7–8, children's responses are frequently different from those of adults when judging the truth-value of sentences with a universal quantifier, such as English 'every'. The errors in question are very robust and have been replicated in a variety of languages (e.g. for Dutch in Philip and Verrips 1994, Philip & Coopmans 1995, Drozd and van Loosbroek 1999, Turkish in Freeman and Stedmon 1986, Japanese in Takahashi 1991, Sugisaki and Isobe 2001, Catalan Gavarro and Escobar 2002, French in Inhelder and Piaget 1959, etc.). The core finding is that while children seem to know the general meaning of the universal quantifier, and would correctly reject a sentence like 'every circle is red' if a picture shown to them contains a number of red and a number of blue circles, under a closer scrutiny their universal quantifier appears to differ in its logical properties from that of adults'.

The type of sentence that has been studied the most is like that in (1). The main puzzle concerns children's responses in so-called minimal contexts, where the context consists of a visual array containing a set of boys pulling wagons with one or two extra individuals of some type (an extra boy, an extra wagon, a girl with or without a wagon etc.). It has been demonstrated that in their judgments, children often react to the presence of an extra individual in interesting ways. Thus, children have been shown to be able to judge correctly as true the sentence in the context of a picture containing symmetrically paired sets; e.g. all of the boys are pulling a wagon and all of the wagons are being pulled by boys. At the same time, children of the same ages have been documented to produce 'symmetry error' responses giving a no-answer in situations when the picture contains an extra unpaired wagon (as in 2):

(1) Experimenter: *Every boy pulling a wagon.*
(2) Context:

(3) Child: No, not this one (points to the extra wagon).

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Additional types of responses that have been documented include so-called 'perfectionist error', a no-response if in addition to wagon-pulling boys, the picture contains a girl, and 'under-exhaustive' errors - a yes-response if the picture contains an extra boy unpaired with a wagon. These odd responses have been used to argue that children interpret universal quantifiers in a way different from adults.

Various theories that have been put forward in the debate on the nature of the non-adult-like responses fall into two groups. One school of thought can be termed the Q-spreading hypothesis. According to this proposal, children make "symmetry" errors because they cannot restrict the quantifier to its domain and allow the domain to spread to other parts of the sentence. Various accounts attributed this failure to various linguistic mechanisms. Thus, the explanations included children's incorrect lexical semantics of *every* or a failure to construct correct semantic representations (Roeper and Matthei 1974, Bucci 1978, Philip 1995), a syntactic analysis of children's universal quantifier as developing from being an adverb to Floating Quantifier to a determiner (Roeper et al. 2004), and a weak construal of the strong quantifier resulting in non-canonical parsing, as well as allowing the quantifier domain to be left underdetermined in the semantic form and allowing pragmatic factors, namely the perceived salience of sets of individuals and information structure to determine its domain (Drozd and van Loosbroek 1999, Geurts 2004).

An alternative approach, which can be termed the Full Competence hypothesis, maintains that the symmetry errors are not due to children's misinterpreting the universal quantifier, but are an artifact of the experimental design, a reaction to the pragmatic infelicity of how the test sentences are typically presented. Thus, according to Crain et al. (1996), in order for a truth value judgment to be felicitous, the context has to meet certain pragmatic conditions, the relevant one for the issue at hand being the condition of Plausible Dissent. It requires for the addressee to be able to conceive of an alternative outcome in order to judge the proposition as true or false in a particular context. According to this approach, young children lack the ability to construct alternative outcomes unless they are explicitly represented by the context. Since the tasks that use picture-contexts usually do not suggest an alternative outcome, children cannot judge the truth or falsity of the sentence reliably, hence the high error rate reported in Q-spreading literature (Crain et al. 1996, Gualmini et al. 2003). According to another pragmatic account, the errors arise when the experimental conditions provide insufficient context for resolving scopal ambiguities of sentences like (1), which arise due to the interaction of the universal and the indefinite. Thus, if the picture contains a salient single individual with the property denoted by the indefinite (i.e. a salient single wagon in case of a sentence containing the expression "a wagon"), children are likely to see its salience as an indication of its relevance for the speaker and construct the domain restriction for the indefinite to include exactly one individual (the extra wagon). Consequently, the sentence receives the "wide scope" indefinite interpretation, false in the situation depicted in the given scenario (Rakhlin 2007).

Despite a significant amount of research in this area, the issue of whether children's knowledge of semantics of the universal quantifier is adult-like or undergoes stage-like development remains unresolved.

2. Presuppositionality of "every" as a window into children's semantics of universal quantification

2.1. "Every" as a Presuppositional Determiner

In order to bring a new type of evidence to bear on the issue of Q-spreading, we can look at an additional meaning component of the universal quantifier, which has not been previously investigated with respect to this issue. I am referring to the presuppositionality of 'every' in adult English grammar. We can ask whether children treat 'every' as presuppositional and if so, whether we can use the presuppositionality of 'every' as a probe into children's grammar of universal quantification. The Q-spreading and Full Competence theories make distinct testable predictions with respect to the behavior of the presupposition, which will be discussed in this section.

The universal quantifier "every" triggers a presupposition of existence of the set denoted by its common noun sister. Thus, the appropriate answer to the question in (4) uttered in the context of a situation in which girls are reading books is not a simple rejection, as in (5), but something like that in (6):

(4) Is every boy reading a book?
(5) - # No.
(6) - Wait a minute, there aren't any boys here!

One standard approach to capturing this intuition is by postulating that if the restrictor set of the universal quantifier is empty, the sentence is neither false nor true, but is truth-valueless. Thus, according to this approach to presuppositions, for universally quantified sentences, such as (7), the existence of the members of the subject set "is a necessary precondition not merely of the truth of what is said, but of being *either* true or false." (Strawson 1952)

(7) Every boy is reading a book.

One way to capture this is by assuming that the surface subject–predicate form of a sentence such as (7) disguises the true logical form of the proposition it expresses. According to this approach, the logical form of (7) contains an additional meaning component informally shown in italics in (8). Under one standard way of formalizing it (e.g. Heim and Kratzer 1998), the presupposition is part of the lexical entry of the quantifier, which denotes a partial 2-place function mapping pairs of properties onto truth-values: to true if the set of individuals, of which property *f* is true, is a subset of the set of individuals of which property *g* is true; to false otherwise; but only if the set of individuals of which f is true is non-null, as shown in (9):

(8) "*There exist some (contextually relevant) boys*, and of these boys every one is reading."
(9) $[[\text{every}]] = [\lambda f \in D_{<e,t>}.\lambda g \in D_{<e,t>}: \mathbf{\{x: f(x)=1\} \neq \emptyset}.\{x: f(x)=1\} \subseteq \{y: g(y)=1\}]$

According to this semantics of 'every', unless the requirement for some contextually relevant boys to exist is satisfied, a speaker would not succeed in making a truth-evaluable claim by uttering (7). Instead, the speaker's utterance would have a truth-value gap, which is why instead of a simple rejection, the sentence in (4) requires the answer in (6) (von Fintel 2001).

2.2. What is the relevance of the presuppositionality of "every" for the Q-spreading debate?

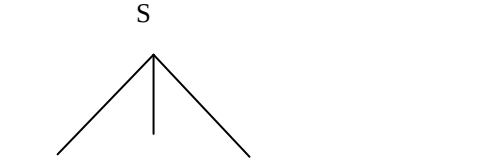
The presuppositionality of "every" may serve as a probe into children's semantics of sentences like (7) because of the obvious fact that the presupposition applies only to the restrictor of the quantifier, and not to other parts of the sentence. Hence, if we can determine to which parts of the sentence the child applies the presupposition, we can see which elements the child includes in the restrictor. To illustrate the first point, again consider the sentence in (4) repeated below as (10) uttered in the context that includes only girls reading books and nothing else. As we discussed previously, in this context, the presupposition of existence fails, the sentence can't have a truth-value assigned to it, and hence the "wait a minute" remark is an appropriate response to it. Compare this with the sentence in (12) uttered in the same context, in which the restrictor of the indefinite (a set of newspapers) is empty. The sentence in this context is not a presupposition failure, but is merely false.

(10) - Is every boy reading a book?
(11) - Wait a minute, there aren't any boys here!
(12) - Is every girl reading a newspaper?
(13) - No, they are all reading books.

If children's semantics of universal quantification is presuppositional, we can expect them to apply the presupposition to the NP(s) that constitute the restrictor of the universal quantifier, which would allow us to tease apart the predictions made by the theories that maintains that children's semantic structure of universal quantified sentences is adult-like from the predictions made by the Q-spreading theories.

If children assign sentences like (7) the same semantic structure as adults and treat "every" as presuppositional (shown in 14), then the presupposition will apply only to the NP contained in the restrictor i.e. presuppose the existence of a non-null agent set), and children should respond the same way as adults with respect to the contexts that trigger a presupposition failure; i.e. treat the sentence as a presupposition failure (lacking a truth value) only in those contexts in which the set of boys is empty. They should judge the sentence as false in those contexts that contain boys but not books.

(14) Every boy read a book.



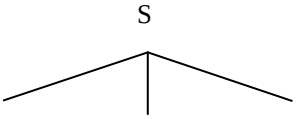
"*For every x, if x is a boy and x is in C, then x read a book.*"[1]

If children spread the domain of quantification to other NPs, as proposed by the Q-spreading theory, then the presupposition should also spread to these NPs. For concreteness, let's take the Event Quantification semantics proposed by Philip (1995) to account for the symmetry errors. According to this proposal, for children, the universal quantifier does not quantify over individuals, as it does for adults, but quantifies over events. Regardless of the surface position of the universal quantifier, it ranges over the entire sentence and its restrictor contains the sub-events *e* (of the contextually relevant event) of which the following is true: an individual of either the agent-type or the theme-type is a participant in the sub-event. Thus, it is proposed that for the child, the sentence in question has the following semantic structure as represented in (15)[2].

[1] Where C is a covert domain restriction, the value of which is supplied by the context and which provides the set of relevant individuals (Westerståal 1984, von Fintel 1995). The presupposition imposes a requirement that the set of boys in C must be non-empty.

[2] Philip 1995 did not discuss the issue of the contextual domain restrictions or the presuppositionality of "every". The structure in (15) reflects Philip's Event semantics with the added domain restriction. Whether or not children treat the universal quantifier as contextually dependent and whether or not they impose any requirements on its contexts is an issue independent from the question of the semantic structure children assign to the universally quantified sentences. We will address the former in the next section, but for the moment we assume that children do treat "every" as presuppositional.

(15) Every boy read a book.



Q	Restrictor	Nuclear Scope
∀e	C & PART(boy, e) or PART(book, e) or both	boy read a book in e

"For every event e, such that e involves a boy or a book as a participant, e is an event of a boy reading a book."

Now we can ask what predictions the Event Quantification semantics makes with respect to the types of context in which the sentence in (15) can be assigned a truth-value and in which contexts its presupposition of existence would fail. Given the restrictor as in (15), the presupposition of existence should fail if the context contains no events with either boys or books. However, to satisfy the presupposition, the existence of some events with either boys or books should be sufficient. Now we can see that in a certain type of context the Event Quantification theory makes a prediction distinct from the Full Competence view. Thus, in those contexts, in which the set of boys is empty, but the set of books isn't, only under the Event Quantification theory the restrictor would be non- empty and hence, the presupposition should be satisfied and the sentence should receive a truth-value. In other words, if children assign the semantic structure as in (15), they shouldn't judge the sentence as odd, but as false in the context of girls reading books.

2.3. A methodological problem

To summarize the conclusion from the previous section, in order to see what semantic structure children assign to sentences like (7), we need to test whether children are able to assign a truth-value to such sentences in a context that contains no boys but does contain some books (e.g. girls reading books). The Full Competence view predicts that children should judge the sentence in such context as odd (and give an equivalent of the "wait a minute" response), while the Even Quantification view predicts that children should judge the sentence false. This presents a methodological problem since it is well known that a reliable contrast between falsity and truth-valuelessness is too subtle and difficult to elicit in children (or even in adults). The most likely experimental outcome in trying to get the children to give a distinct respond to a false sentence as opposed to an odd sentence would be getting a rejection (a no-response) in both instances.

Fortunately, there is a possible solution to this problem, namely adding a negation to a universally quantified sentence. In a negated sentence, the universal quantifier remains presuppositional, while at the same time the negation reverses the truth-value of the sentence, making a false sentence true in the same context. We can capitalize on this observation and use universally quantified negated sentences with and without a failed presupposition as our test items. This contrast would allow us to present children with stimuli that are either truth-valueless and hence can be rejected as odd, or true, which can be accepted. Compare the following two sentences uttered in the context of girls reading books (and no boys). While (16) is clearly odd, (17) is true. If we can show that children are able to judge a pair of sentences like these correctly, then we will have an argument that for them only the agent-set is presupposed and hence the quantifier ranges only over its sister NP, contrary to the Q-spreading theory.

(16) Every boy isn't reading a book.
(17) Every girl isn't reading a newspaper

2.4. Do children treat 'every' as presuppositional?

Before we can proceed any further, we have to address the preliminary question of whether children treat "every" as triggering the existence presupposition. Experimental work in this area has been relatively scarce. Some research addressed children's use of the definite determiner, which appears to be non-adult-like (Maratsos 1976, Karmiloff-Smith 1979, Schaeffer & Matthewson 2005). The research on the presupposistions of "every" seems to indicate that children are adult-like from early on at least with the existence presupposition. Thus, Yatsushiro and Sauerland (2004) tested 16 English-speaking children between the ages of 3;11-5;11. In their experiment, in the context in which the speaker had no grandmother, the children rejected (18) at the high rate of 72%:

(18) Every grandma of mine is wearing red pants.

In a larger study, Yatsushiro (2007) tested 120 6- to 9-year old German-speaking children on the knowledge of the presuppositions of *jeder* 'every'. The rate of adult-like responses on the relevant condition (the existence presupposition) across all age groups was above 90%. The results of these studies indicated that the existence presupposition of 'every' and its German equivalent *jeder* is acquired quite early.

3. The experiment

The present experiment was conducted to test the predictions discussed in section 2.2. As discussed above, if children assign sentences like (16) repeated below as (19) the same semantic structure as adults, then the presupposition will apply only to the agent-NP and children should respond the same way as adults with respect to the contexts that trigger a presupposition failure: treat the sentence as odd in those contexts in which the set of boys is empty, but judge it as true if the set of books is empty (e.g. there are boys reading magazines). On the other hand, if children spread the domain of quantification to other NPs, as proposed by the Q-spreading theories, the presupposition should also spread to these NPs. Thus, if children give (19) an Event Quantification reading as in (20), since both boys and books are included in the restrictor, the presupposition should be satisfied in those contexts in which either the set of boys or the set of books is non-empty; i.e. be judged as true both in the contexts in which there are girls reading books or the contexts in which there are boys reading magazines).

(19) Every boy isn't reading a book.
(20) For every event *e*, such that *e* involves a boy or a book as a participant, *e* is not an event of a boy reading a book.

These predictions were tested in an experiment using the standard Truth -Value Judgment task modified for judging the truth of presuppositions.

Subjects: 18 preschool-aged monolingual English-speaking children with the median age of 4;8, who were attending the preschool at the Child and Family Resource Center at Eastern Connecticut State University. Two were unable to complete the task and were excluded. Fifteen adult controls were also tested using the same materials in the form of a pencil-and-paper questionnaire.

Procedure: Esmeralda - the fortune-teller puppet - is looking into her 'fuzzy' crystal ball trying to guess what is in the picture that the child is looking at. The child is asked to judge whether her description of the picture is correct.

Materials: Each child was presented with picture-contexts paired with universally quantified negated sentences presented in two experimental and two control conditions in fixed pseudo-random order (4 items in each). The stimuli were presented in the following conditions: Failed Presupposition (FP), Satisfied Presupposition, and two control conditions, as illustrated in (21)-(24). Additional elements were added into the contexts to make the stimuli more felicitous by providing a contrastive

set to the set denoted by the universally quantified NP. [3]

(21) Failed Presupposition (FP) condition:
Context: a picture of three cats wearing hats and two dogs wearing ties.
Puppet: I see animals all dressed up! The dogs are wearing ties, and the cats are wearing hats, but **every monkey isn't wearing a hat**!

(22) Satisfied Presupposition (SP) Condition:
Context: three girls, each holding a doll; a man holding a cake.
Puppet: I see people holding something. The man is holding a cake; the girls are holding dolls, but **every girl isn't holding a teddy bear.**

(23) Control 1: Satisfied Presupposition (C-SP)
Context: a group of dogs running and one dog sitting.
Puppet: I see dogs running, but **every dog isn't running**; one dog is sitting.

(24) Control 2: Failed Presupposition (C-FP)
Context: cats eating cat food.
Puppet: I see animals eating; every cat and **every bunny is eating**.

For the summary of predictions for each condition see table 1.

Table 1: Predictions:

	FP	SP	C-SP	C-FP
Adult-like	reject	accept	accept	reject
Q-spreading	accept	accept	accept	reject

Results: for the summary of children's results see table 2, adult controls table 3.

Table 2: The number of children who accepted and rejected 3 or more items in each condition):

Results:	FP	SP	C-SP	C-FP
reject	12	4	2	16
accept	3	8	12	0
split	1	4	2	0

[3] See the Appendix for the sample pictorial contexts.

Table 3: Adult Controls

	FP	SP	C-SP	C-FP
reject	13	0	1	13
accept	2	15	13	2
split	0	0	1	0

4. Discussion of the results

The first finding was a confirmation of the earlier reports that children treat 'every' as presuppositional, as shown by the fact that they correctly rejected the control sentences (without negation) with the failed presupposition (C-FP). We can conclude that the existence presupposition of 'every' is acquired by the age of 5. Another major finding was that 75 % of the children correctly rejected the test sentences with a failed presupposition (FP). This was very close to the pattern of rejections in the adult control group. One may object that the reason children rejected the sentence in the FP condition had nothing to do with the failed presupposition, but indicated their difficulties with interpreting sentences with scopal ambiguities (due to the interaction between negation and the universal quantifier). The control condition with the satisfied presupposition (C-SP) repeated below was aimed at addressing this issue.

(25) Every dog isn't running. One dog is sitting.

In these items, the sentences were true only under the inverse scope; i.e. in the picture all dogs but one were running. It was false under the surface scope reading; the reading, under which none of the dogs are running. Since 75% of the children correctly accepted these controls showing that they are able to assign a truth-value to scopally ambiguous sentences with negation given that the presupposition is satisfied and the items are presented in a pragmatically felicitous way. The scopally ambiguous test items with the satisfied presupposition, repeated in (26), were true under the surface scope in the contexts in which they were presented. However, in this case the surface scope entails the inverse scope: if it's true that 'none of the girls are holding a teddy bear' (the surface scope reading), it would also be true that 'it's not the case that every girl is holding a teddy bear' (the inverse scope).

(26) Every girl isn't holding a teddy bear (in a context in which all of the girls are holding dolls).

Therefore, it is unclear why this condition produced the most split results: only 8 out 16 children consistently accepted these sentences, compared to all of the adults. Perhaps, those children who rejected these sentences, interpreted them under the inverse scope and understood them as carrying an implication: it's not the case that every girl is holding a teddy bear, *only some of them are*, which was not the case in the context in which the sentence was presented.

In contrast, children's answers were much more uniform in the test condition with the failed presupposition (FP). It is quite plausible that since these sentences had a failed presupposition and hence couldn't be assigned a truth–value, this made it easier for the children to make their judgment because it eliminated a need for choosing the right scopal interpretation.

4.1. Conclusion

As discussed earlier in the paper, the Q-spreading theory and the full Competence theory make distinct predictions with respect to children's treatment of the presupposition of existence. While the former predicts that children should 'spread' the presupposition and consequently respond identically in FP and SP conditions (namely accept both at a similar rate); the Full Competence theory predicts that children's responses should vary across the two conditions (reject the former and accept the latter). Our results showed no evidence of "presupposition spreading": the response pattern across the two experimental conditions clearly shows that for the children, the existence presupposition triggered by the universal quantifier could not be satisfied by the non-null object. T-test for correlated samples comparing the rejection rate in the two test conditions showed a highly significant contrast between the two conditions: paired $t(15)=4.24$, two-tailed $p<.001$. The overall finding was that children's treatment of the presupposition of existence triggered by the universal quantifier is largely adult-like.

Appendix

Condition 1 – Failed Presupposition (FP): Puppet: I see animals all dressed up! The dogs are wearing ties, and the cats are wearing hats, and every monkey isn't wearing a hat!

Context:

Condition 2: Satisfied Presupposition (SP)
Puppet: I see people holding something. The man is holding a cake; the girls are holding baby-dolls, and very girl isn't holding a teddy bear.

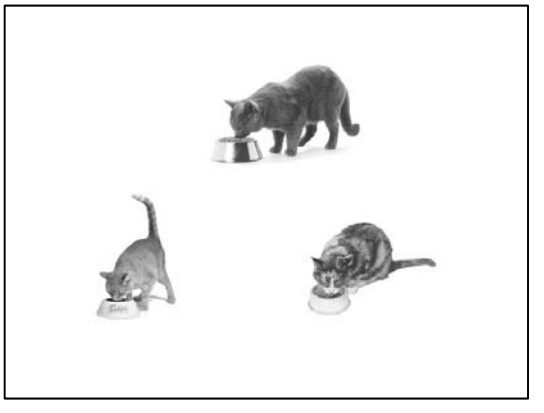
Context:

Control 1: Satisfied Presupposition (C-SP)
Puppet: I see dogs running, but every dog isn't running; one dog is sitting.

Context:

Control 2: Failed Presupposition (C-FP)
Puppet: I see animals eating. Every cat and every bunny is eating.

Context:



References

Bucci, Wilma. (1978). "The interpretation of universal affirmative propositions." *Cognition, 6*, 55-57.

Crain, Stephen, Rosalind Thornton, Carrol Boster, Laura Conway, Diane Lillo-Martin, and Ellen Woodams (1996) "Quantification without Qualification." *Language Acquisition* 5(2), 83-153.

Drozd, Kenneth, and Erik van Loosbroek (1998). "Weak quantification, plausible dissent, and the development of children's pragmatic competence." In *Proceedings of the 23rd Boston University Conference on Language Development*, 184-195. Somerville: Cascadilla Press.

Freeman, Norman H. & Stedmon, Jacqueline A. (1986). How children deal with natural language quantification. In I. Kurcz, G. W. Shugar & J. H. Danks (Eds.), *Knowledge and language* (pp. 21-48). Amsterdam: Elsevier North-Holland.

von Fintel, Kai. (2001). Would you believe it? The king of France is back! Presuppositions and truth value intuitions. In *Descriptions and Beyond*, ed. A. Bezuidenhout and M. Reimer. Oxford: Oxford University Press.

Gavarró, Anna and Linda Escobar (2002) "A Pilot Study of Quantification in Child Catalan," Report de Recerca

GGT-02-3, UAB.

Geurts, Bart (2003). "Quantifying kids." *Language Acquisition* 11: 197-218.

Gualmini Andrea, Luisa Meroni and Stephen Crain (2003). "An Asymmetric Universal in Child Language. In *Proceedings of "Sub7– Sinn und Bedeutung"*, *Arbeitspapier* 114, Matthias Weisgerber (ed.). University of Konstanz, Germany.

Heim, Irena & Angelika Kratzer (1998). *Semantics in Generative Grammar*. Oxford (Basil Blackwell).

Inhelder, Barbel and Jean Piaget (1964). *The early growth of logic in the child*. London: Routledge, Kegan and Paul.

Karmiloff-Smith, Annette. 1979. *A Functional Approach to Child Language: A Study of Determiners and Reference*. New York: Cambridge University Press.

Maratsos, Michael (1976). *The Uses of Definite and Indefinite Reference in Young Children: An Experimental Study of Semantic Acquisition*. Cambridge: Cambridge University Press.

Philip, William (1995). "Event Quantification in the Acquisition of Universal Quantification." Doctoral dissertation, University of Massachusetts, Amhert.

Philip, William and Peter Coopmans (1995). "Symmetrical interpretation and scope amibuity in the acquisition of universal quantification in Dutch and English", UiLOTS Working Papers.

Philip, William & Maaike Verrips (1994). "Dutch Preschoolers' Elke." Paper presented at the 19th Annual Boston University Conference on Language Development, Boston.

Rakhlin, Natalia. (2007). "Children's Interpretation of Negative Determiners as a Window into Q-Spreading." Proceedings of the 2nd Conference on Generative Approaches to Language Acquisition North America, ed. Alyona Belikova et al., 363-373. Somerville, MA: Cascadilla Proceedings.

Roeper, Tom and Ed Matthei (1975) "On the acquisition of all and some." *Papers and Reports on Child Language Development 9*. Stanford: Stanford University Press

Roeper, Tom, Uri Strauss and Barbara Zurer Pearson (2004). The Acquisition Path of Quantifiers: Two Kinds of Spreading, UMass Amherst, on-line ms.

Strawson, Peter F. (1952), *Introduction to Logical Theory*. London: Methuen

Schaeffer, Jeannette and Lisa Matthewson (2005). "Grammar and Pragmatics in the Acquisition of Article Systems." *Natural Language and Linguistic Theory* 23:53-101.

Sugisaki, Koji and Miwa Isobe (2001). Quantification without Qualification without Plausible Dissent, SULA, UMass

Takahashi, Mari (1991). "Children's interpretations of sentences containing every." In *Papers in the Acquisition of WH: Proceedings of the UMass Roundtable*. May 1990. T. Maxfield and B. Plunkett (eds.) . Amherst, MA: GLSA.

Yatsushiro, Kazuko and Uli Sauerland (2005). "The Acquisition of Presuppositions: The Presuppositions of *Every."* presented at Experimental Pragmatics, Center for Research in the Art, Social Sciences and Humanities, University of Cambridge.

Yatsushiro, Kazuko (2007). "German determiner presuppositions in first language acquisition." In *BUCLD 32 Proceedings Supplement*. Ed. Heather Jacob, Harvey Chan and Enkeleida Kapia.

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