Appendix

A.1 Summaries of studies used in the synthesis of experimental studies

Crain, Thornton, and Murasugi (2009)

Experiment - Were asked to pose questions to another experimenter

- Task/Procedure: Elicited Production Task

- # of Subjects: 35

- Age Range: 3;04-5;00 (for 32 of the children)

- Verbs Used: (Drawn from sample elicited data) *knock, eat, push, hit, lick, scratch, shoot, kill, pick up, crash, kiss, bite, punch*

- Long/Short: Long

- Results: 29 children produced at least one long verbal passive; 24 produced three or more long passives; as young as 3;04

de Villiers and de Villiers (1973)

Experiment - "Show me X"

- Task/Procedure: Act-Out Task

- # of Subjects: 33

- Age Range: 1;07-3;01

- Verbs Used: *kiss, push, hit, vite, bump, touch*

- Long/Short: Long

- Results:

	Actives		Passives	
	% Correct	% Reversed	% Correct	% Reversed
Group IV (2;08-3;01)	87%	12.2%	34.4%	65.6%

Fox and Grodzinsky (1998)

Experiment 1   - divided already small sample into even smaller groups for analysis

- Task/Procedure: Truth Value Judgment Task

- # of Subjects: 13

- Age Range: 3;06-5;05

- Verbs Used: actional = [*touch, chase*]; non-actional = [*hear, see*]

- Long/Short: Long and Short; Short for non-actionals only

- Results: 2 children were adult-like; 8 children only had problems with long non-actionals; and 3 children had problems with long and short non-actionals

Gordon and Chafetz (1990)

Experiment 1   - Child-directed input was analyzed

- Task/Procedure: Corpus Analysis

- # of Subjects: Brown Corpus (Adam, Eve, and Sarah); 86,655 utterances

- Age Range: 1;06 - 5;01

- Results: Passives presented 36/1000 of all input utterances; only 4 long passives total; 93% of verbal passives that appeared were actional. Adjectival and Adjunct passives were also collected.

Experiment 2   - Presented with a story; Had to answer Yes/No questions; "Was John hated (by the peas)?"

- Task/Procedure: Comprehension Study

- # of Subjects: 30 3-year-olds and 4-year-olds

- Age Range: 3;00-4;02 (MA=3;06); 4;02-5;06 (MA=4;06)

- Verbs Used: actional = [*drop, eat, carry, kiss, hold, wash, shake, hug, kick*]; non-actional = [*watch, forget, hear, know, remember, believe, like, see, hate*]

- Long/Short: Long and Short

- Results:

	Long Passives		Short Passives	
	Actional	Non-Actional	Actional	Non-Actional
3 yr	0.69	0.41	0.77	0.48
4 yr	0.58	0.29	0.64	0.39

Hirsch and Wexler (2006)

Experiment 1 -

- Task/Procedure: Picture Selection Task

- # of Subjects: 60 3-, 4-, and 5-year-olds

- Age Range: 3;00-5;11 (MA=4;05)

- Verbs Used: actional = [*push, kiss, kick, hold*]; psychological = [*remember, love, hate, see*]

- Long/Short: Long and Short

- Results:

Group	Long Actionals	Short Actionals	Long Psych	Short Psych
3-	66.2%	72.5%	35.0%	30.0%
3+	53.7%	76.2%	33.8%	35.0%
4-	73.8%	80.0%	38.8%	40.0%
4+	65.0%	76.2%	45.0%	50.0%
5-	88.7%	87.5%	38.8%	47.5%
5+	92.5%	92.5%	43.8%	55.0%

Liter, Huelskamp, Weerakoon, and Munn (2015)

Experiment 1 - eventive & agentive vs eventive & non-agentive

- Task/Procedure: TVJT

- # of Subjects: 17 adults and 14 children

- Age Range: 4;05 - 6;02 (MA = 5;01)

- Verbs Used: eventive & agentive = [*paint, fix, wash*]; eventive & non-agentive = [*forget, find, spot*]

- Long/Short: Long

- Results:
  Eventive & agentive and eventive & non-agentive = above chance
  Eventive & agentive > eventive & non-agentive

Experiment 2   - non-eventive & agentive vs non-eventive & non-agentive

- Task/Procedure: TVJT

- # of Subjects: 16 adults and 12 children

- Age Range: 3;09 - 5;10 (MA = 4;11)

- Verbs Used: eventive & non-agentive = [*forget, find, spot*]; non-eventive & non-agentive = [*know, hate, love*]

- Long/Short: Long

- Results:
  eventive & non-agentive = above chance; non- eventive & non-agentive = chance
  Eventive & non-agentive marginally significantly better non-eventive & non-agentive (p = .07)
  But eventive & non-agentive from Exp. 1 > non-eventive & non-agentive from Exp. 2

Maratsos and Abramovitch (1975)

Experiment 1

- Task/Procedure: Act-Out Task

- # of Subjects: 40

- Age Range: 2;11-3;11

- Verbs Used: *kick, kiss, push, hit, bite, bump, tickle, touch*

- Long/Short: Long and Short

- Results: 13 subjects showed stable competence in both long and short passives; 20 demonstrated stable competence in neither type; three subjects showed stable competence in short but not long passives, while four subjects showed the complementary pattern of competence in long but not short passives.

Maratsos, Fox, Becker, and Chalkley (1985)

Experiment 1   - "Who did it?"

- Task/Procedure: Presented with sentence, answer to question

- # of Subjects: 38 4- and 5-year-olds

- Age Range: 5-year-old (MA = 5;06); 4-year-olds (MA = 4;07)

- Verbs Used: actional = [*find, hold, shake, wash*]; mental state = [*remember, forget, know, like, miss, see, hear, watch*]; *smell*; novel verbs

- Long/Short: Long

- Results:

Actionals	Mental States	Novel Verbs
0.67	0.40	0.47

Actional Verb	% Correct	Mental States	% Correct
drop	0.66	*watch*	0.47
hold	0.69	*know*	0.43
shake	0.67	*hear*	0.45
wash	0.67	*like*	0.43
		remember	0.38
smell	0.60	*see*	0.41
		forget	0.31

Experiment 2

- Task/Procedure: Picture Selection Task

- # of Subjects: 80 4-, 5-, 7-, 9-, and 11-year-olds

- Age Range: 4-year-olds (MA=4;05); 5-year-olds (MA=5;04); 6-year-olds (MA=6;10); 8-9-year-olds (MA=8;10); 10-11-year-olds (MA=10;10)

- Verbs Used: actionals = [*wash, kiss, push, kick, find, hold*]; mental states = [*see, hear, like, love, hate, remember*]

- Long/Short: Long

- Results:

Age	Actionals	Mental States
4 yr	0.85**	0.34
5 yr	0.91**	0.65*
7 yr	0.92**	0.62
9 yr	0.96**	0.87**
11 yr	0.99**	0.99**

Age	*like*	*love*	*hate*	*remember*	*see*
4 yr	0.42	0.35	0.42	0.29	0.27
5 yr	0.75**	0.65**	0.69*	0.67*	0.48
7 yr	0.77**	0.69**	0.52	0.63	0.48
9 yr	0.96**	0.90**	0.90**	0.81**	0.78**
11 yr	1.00**	0.98**	1.00**	1.00**	0.94**

Messenger, Branigan, McLean, and Sorace (2012)

Experiment 1

- Task/Procedure: Picture Selection Task

- # of Subjects: 24

- Age Range: 3;04 - 4;11 (MA = 4:02)

- Verbs Used: agent-pat actional - [*bite, carry, hit, pat, pull, squash*]; subj-exp non-actional = [*hate, hear, ignore, love, remember, see*]; obj-exp non-actional = [*annoy, frighten, scare, shock, surprise, upset*]

- Long/Short: Long

- Results:

	Mean Score (Out of 6)	(Converted) Percentage
Actional	4.63	77%
Subj-Exp	2.42	40%
Obj-Exp	4.13	69%

Experiment 2 - Syntactic Priming Experiment

- Task/Procedure: Production Study

- # of Subjects: 24 (Same children from Exp 1)

- Age Range: 3;04 - 4;11 (MA = 4:02)

- Verbs Used: agent-pat actional - [*chase, hug, kick, kiss, lick, pinch, punch, push, scratch, shake, tickle, wash*]; subj-exp non-actional = [*hate, hear, ignore, love, remember, see*]; obj-exp non-actional = [*annoy, frighten, scare, shock, surprise, upset*]

- Long/Short: Long

- Results:

	Prime	Mean (SD)
Active	Sub-Exp	0.16 (0.29)
	Obj-Exp	0.10 (0.23)
Passive	Sub-Exp	0.32 (0.33)
	Obj-Exp	0.39 (0.36)

Nguyen, Lillo-Martin, and Snyder (2018)

Experiment - Manipulated 2- vs 3- character stories

- Task/Procedure: Truth Value Judgment Task

- # of Subjects: 20 4-year-olds

- Age Range: 3;06 - 6;01 (MA = 4;06)

- Verbs Used: actional = [*chase, hug*]; non-actional = [*like, see*]

- Long/Short: Long

- Results:

	Long Passive - 2-Characters	Long Passives - 3-Characters
Actional Verb	73% **	75% **
Non-Actional Verb	49%	61%

O'Brien, Grolla, and Lillo-Martin (2006)

Experiment 1 - only 3-character stories

- Task/Procedure: Truth Value Judgment Task

- # of Subjects: 11 4-year-olds

- Age Range: 4;00 - 4;10 (MA = 4;04)

- Verbs Used: actional = [*chase, hug*]; non-actional = [*hear, see*]

- Long/Short: Short and Long

- Results:

	Short Passive - 3-Characters	Long Passives - 3-Characters
Actional Verb	88%**	93%**
Non-Actional Verb	100%**	82%*

Experiment 2 - Manipulated 2- vs 3- character stories

- Task/Procedure: Truth Value Judgment Task

- # of Subjects: 7 3-year-olds

- Age Range: 3;02 - 4;02 (MA = 3;06)

- Verbs Used: actional = [*chase, hug*]; non-actional = [*like, see*]

- Long/Short: Long

- Results:

	Long Passive - 2-Characters	Long Passives - 3-Characters
Actional Verb	55%	85%*
Non-Actional Verb	65%	95%**

Orfitelli (2012)

Experiment   -

- Task/Procedure: Picture-Selection Task

- # of Subjects: 30

- Age Range: 4;0-6;11

- Verbs Used: actional = [*carry, kick, kiss, push*], actional = non-actional = [*love, remember,hear, see*]

- Long/Short: Long and Short

- Results:

	Active		Short Passive		Long Passives	
	Actional	Non-Actional	Actional	Non-Actional	Actional	Non-Actional
4 years (N=10)	99%	96%	80%	34%	82%	38%
5 years (N=10)	97%	97%	96%	47%	92%	39%
6 years (N=10)	100%	100%	100%	79%	100%	82%