

Appendix/Supplementary Materials

Table A1

Excluded studies/experiments and reason for exclusion

Authors (year)	Reasons for exclusion
Connolly lab (unpublished, 2010)	Stories were used
Connolly & Lindsay (2001, Exp 2 only)	No single-event group; no age or delay groups that met criteria
Danby, Brubacher, Sharman, & Powell (2017)	Participants were the same as Danby, Brubacher, Sharman, Powell, & Roberts (2017)
Drohan-Jennings, Roberts, & Powell (2010)	Control group data identical to Roberts and Powell (2006)
Elischberger (2005)	Stories were used
Erskine, Markam, & Howie (2002)	Two slide sequences were used
Farrar & Boyer-Pennington (1999)	Contextual and free recall were collapsed; data were of an episodic change score
Farrar & Goodman (1990, 1992)	Three identical visits and one deviation visit; no variable details/options in each instance
Feltis, Powell, & Roberts (2011)	Analyses based on a subset of Powell & Thomson's (1996) data; that study was excluded
Fivush (1984)	Base truth unknown; previously experienced event
Fivush, Kuebli, & Clubb (1992)	Only some details varied across instances and were not reported separately
Hubbard et al. (2016)	Variable details were not included
Hudson (1990)	Pooled fixed and variable details, recall type collapsed; missing data for analyses
Hudson & Nelson (1986)	Base truth unknown; previously experienced event
Kuebli & Fivush (1994)	Recall pertained to general event rather than instance; details that changed were reported
McNichol, Shute, & Tucker (1999)	Variable details/options in each instance were not included
Phenix & Price (2012)	Nature of the event and recall task; insufficient data
Powell et al. (2007, Exp 3 only)	No single-event, age or delay conditions for analyses
Powell & Thomson (1996)	Varied high/low frequency of variable options
Powell & Thomson (1997b)	Four item details/options changed across instances; data for these items were not reported
Powell, Thomson, & Ceci (2003)	Exp 1: Varied high/low frequency of options; Exp 2: applicable data were published in Powell et al. (1999); sequencing tasks (Exps 2, 3)
Price & Connolly (2013)	Same participants as Connolly and Price (2006) (second interview following a delay)
Price & Goodman (1990)	Variable details were not included; reenactment/feedback during interviews
Roberts & Blades (1998)	Children watched one live and one videotaped event

Roberts et al. (2015)	Recall of an instance was not reported
Roberts & Powell (2005a, Exps 1 and 2)	Recognition data were relevant, but hits and correct rejects were not reported separately
Roberts & Powell (2005b)	Verbal inhibition tasks were employed
Scheeringa (2015)	Base truth unknown; previously experienced event; accuracy not reported
Slackman & Nelson (1984)	Stories were used
Woiwod, Coburn, Bernstein, Alder, & Connolly (2017)	No single-event group; no delay group; age groups were under 6.4 and over 8.5 (these two age groups were not compared)

Table A2

Study characteristics of included studies

Authors (year)	SE (y/n)	# of REs	Spacing of REs	Mage (years)	SDage (years)	Target event	Label	Delay
Brubacher, Glisic, Roberts, & Powell (2011)	no	4	2/week	5.18; 7.97	0.55; 0.59	Child chose	"remember best"	5-7 days
Brubacher, Roberts, & Powell (2011)	yes	4	2/week	6.06; 7.95	0.56; 0.63	Child chose	"remember best"	5-7 days
Brubacher, Roberts, & Powell (2012)	yes	4	2/week	4.95; 8.08	0.48; 0.59	Child chose	"remember best"	5-7 days
Connolly et al. (2014, unpublished data)	no	5	1 each day	6.65; 8.29	0.52; 0.51	All	name of magic trick	2-3 days
Connolly & Gordon (2014)	yes	4, 6	2 in 2 days	7.24	0.60	Last	"bowtie magic time"	7 days
Connolly, Gordon, Woiwod, & Price (2016, Exp 1)	yes	4	2 in 2 days	8.54	0.61	Last	"bowtie magic time"	2 days
Connolly et al. (2016, Exp 2)	yes	4	2 in 2 days	8.13	1.43	Last	"bowtie magic time"	2 days
Connolly et al. (2016, Exp 3)	no	4	2 in 2 days	7.15; 9.78	0.99; 0.84	All	name of magic trick	1-2 days
Connolly & Lindsay (2001, Exp 1)	yes	4	1 each day	4.33; 6.46; 8.18	0.44; 0.38; 0.70	Last	"apron day"	Bias: 4 days; recall next day
Connolly & Price (2006)	yes	4	2 in 2 days	4.69; 6.52	0.63; 0.37	Last	"cape day"	Bias: 2 weeks; recall next day

Danby, Brubacher, Sharman, Powell, & Roberts (2017)	no	4	2/week	6.26; 7.42; 8.64	0.40, 0.30, 0.54	Child chose	“remember best” and “another time”	3-8 days
Danby, Sharman, Brubacher, Powell, & Roberts (2017)	no	4	2/week	6.74; 8.86	0.86, 0.50	Child chose	“remember best” and “another time”	4-7 days or 8-14 days
Deane, Patterson, Woiwod, Coburn, & Connolly (2017)	yes	5	1 each day	8.39	0.42	First	“first” plus unique name of magic trick	7 days
Pearse, Powell, & Thomson (2003)	yes	4	2/week	6.67	0.35	Last	"last" or "last" plus unique badge/leader	3 days
Powell & Roberts (2002)	yes	4	2/week	Cued: 5.75; Yes/no: 5.66	Cued: 0.35; Yes/no: 0.35	Last	"badge"	Bias: 3 days or 3 weeks; recall next day
Powell, Roberts, Ceci, & Hembrooke (1999, Exp 1)	yes	5	2/week	4.83; 7.16	0.36; .64	Last	"badge"	Bias: 3 days or 3 weeks; recall next day
Powell et al. (1999, Exp 2)	yes	4	2/week	5.5	0.35	Last	"badge"	Bias: 7 days; recall next day
Powell, Roberts, & Thomson (2000)	yes	4	2/week	5.67	0.35	Last	"badge" or general	Bias: 3 days or 3 weeks; recall next day
Powell, Roberts, Thomson, & Ceci (2007, Exp 1)	no	6	2/week	4.5; 7.08	0.64; 0.60	Last	"badge"	Bias: 3 days or 3 weeks; recall next day

Powell et al. (2007, Exp 2)	no	4	2/week	6.67	0.32	Last	"badge"	Bias: 3 days or 3 weeks; recall next day
Powell & Thomson (1997a, Exp 1)	no	6	2/week	4.83; 7.17	0.36; 0.64	Last	"badge"	5-6 days or 5-6 weeks
Powell & Thomson (1997a, Exp 2)	no	6	2/week	4.83; 7.33	0.37; 0.62	Last	"badge"	5-6 days or 5-6 weeks
Powell & Thomson (2003, Exp 1)	no	4	2/week	5.83; 7.83	0.36; 0.70	Last	"badge"; "last time" plus either verbal or physical options provided by interviewer	2 weeks
Powell & Thomson (2003, Exp 2)	no	6	2/week	4.75; 7.33	0.35; 0.61	Last	recall all options across instances; "badge"	5-6 days or 5-6 weeks
Powell & Thomson (2003, Exp 3)	no	4	2/week	6.0; 8.08	0.31; 0.34	Last	recall all options across instances; "badge"; verbal options provided by interviewer	5 days
Price & Connolly (2004)	yes	4	1 each day	4.88	0.63	Last	"cape day"	Bias: 4 days; recall next day

Price & Connolly (2007)	yes	4	2/week	4.86	0.66	First	"flower day"	Bias 1: 2.5 weeks after first lesson; Bias 2: 1 week later; Bias 3: 1 week later; recall 2 days after final biasing session
Price, Connolly, & Gordon (2006, Exp 1)	yes	4	1 day; 1 each day	7.82	0.78	Last	"moustache playtime"	Bias: 1 day; recall 2 hours
Price et al. (2006, Exp 2)	yes	4	1 day; 1 each day; 4 in 10 days	7.82	0.61	Last	"bowtie playtime"	Bias: 1 week; recall next day
Roberts & Powell (2006)	yes	4	2/week	6.67	0.34	Last	"badge/necklace" or "other RA [name]"	Bias: 1 or 4 weeks; recall next day
Roberts & Powell (2007)	yes	4	2/week	5.75	0.31	Last	"badge"	Bias: 3 or 21 days; recall next day or 3 weeks later

Note: In our analyses, ages were grouped as follows: 6.4 years and under, 6.5- to 8.4-year-olds, 8.5- to 10.0-year-olds (RE comparisons only for the last group due to availability); and delay between the target instance and the interview were grouped as less than one week, one week or more.

Table A3

Free recall statistics for primary studies

Response type	Study	Event Type				Effect Size & 95% CIs		
		Single		Repeated		<i>g</i>	<i>LL</i>	<i>UL</i>
		Rate	<i>N</i>	Rate	<i>N</i>			
Correct Detail	Brubacher, Roberts et al. (2011)	.17	112	.12	89	0.50	0.22	0.78
	Brubacher et al. (2012)	.19	77	.19	58	0.00	-0.34	0.34
	Connolly et al. (2016) Exp 1	.83	17	.30	48	1.99	1.35	2.64
	Connolly & Gordon (2014)	.11	42	.05	82	0.68	0.30	1.06
	Connolly & Price (2006)	.18	48	.04	48	1.09	0.66	1.52
	Deane et al. (2017)	.12	50	.11	51	0.08	-0.31	0.47
	Pearse et al. (2003)	.24	67	.15	62	0.85	0.49	1.21
	Price & Connolly (2004)	.48	45	.17	45	1.45	0.99	1.91
	Price & Connolly (2007)	.08	43	.02	38	0.88	0.43	1.33
	Price et al. (2006) Exp 1	.53	15	.25	30	1.40	0.72	2.07
	Price et al. (2006) Exp 2	.28	20	.07	57	1.74	1.17	2.32
Int. Intrusion	Connolly et al. (2016) Exp 1	.03	17	.43	48	-1.39	-1.99	-0.79
	Deane et al. (2017)	.01	50	.03	51	-0.52	-0.91	-0.13
	Price & Connolly (2004)	.00	45	.32	45	-1.95	-2.45	-1.45
	Price & Connolly (2007)	.02	43	.02	38	0.00	-0.43	0.43
	Price et al. (2006) Exp 1	.01	15	.18	30	-1.06	-1.71	-0.42
	Price et al. (2006) Exp 2	.01	20	.15	57	-1.00	-1.52	-0.47
Correct + Int. I.	Connolly et al. (2016) Exp 1	.36	17	.39	48	-0.11	-0.66	0.43
	Deane et al. (2017)	.13	50	.13	51	-0.06	-0.45	-0.33
	Price & Connolly (2004)	.48	45	.49	45	-0.04	-0.45	0.37
	Price & Connolly (2007)	.10	43	.05	38	0.51	0.07	0.95
	Price et al. (2006) Exp 1	.53	15	.43	30	0.39	-0.22	1.01
	Price et al. (2006) Exp 2	.28	20	.23	57	0.25	-0.25	0.76
Ext. Intrusion	Brubacher, Roberts et al. (2011)	.05	112	.03	118	0.31	0.05	0.57
	Brubacher, Roberts et al. (2012)	.05	77	.05	80	0.00	-0.31	0.31
	Connolly et al. (2016) Exp 1	.04	17	.05	48	-0.04	-0.59	0.50
	Connolly & Gordon (2014)	.02	42	.01	82	0.42	0.04	0.79
	Deane et al. (2017)	.01	50	.01	51	0.00	-0.39	-0.39
	Pearse et al. (2003)	.00	67	.00	62	0.00	-0.34	0.34
	Price & Connolly (2004)	.13	45	.13	45	0.00	-0.41	0.41
	Price & Connolly (2007)	.03	43	.01	38	0.31	-0.13	0.75
Don't Know	Connolly et al. (2016) Exp 1	.06	17	.00	48	0.65	0.09	1.21
	Deane et al. (2017)	.00	50	.01	51	-0.44	-0.83	-0.05
Suggested Detail	Connolly & Price (2006)	.02	48	.05	48	-0.55	-0.96	-0.15
	Price & Connolly (2007)	.08	43	.06	38	0.20	-0.23	0.63
	Price et al. (2006) Exp 1	.03	15	.08	30	-0.31	-0.92	0.30
	Price et al. (2006) Exp 2	.10	20	.13	57	-0.16	-0.66	0.35

Note: The number of participants for Brubacher, Roberts, and Powell (2012) differs for external intrusions because the data for this dependent variable represents the proportion from the total sample whereas the proportions for other dependent variables represent only the details that were spontaneously recalled in free recall.

Table A4

Cued recall statistics for primary studies

Response type	Study	Event Type				Effect Size & 95% CIs		
		Single		Repeated		<i>g</i>	<i>LL</i>	<i>UL</i>
		Rate	<i>N</i>	Rate	<i>N</i>			
Correct Detail	Connolly et al. (2016) Exp 1	.63	17	.34	48	0.89	0.32	1.46
	Connolly et al. (2016) Exp 2	.54	28	.31	26	1.07	0.44	1.70
	Connolly & Gordon (2014)	.54	42	.21	82	2.29	1.82	2.75
	Connolly & Price (2006)	.20	48	.06	48	1.19	0.76	1.62
	Deane et al. (2017)	.59	50	.46	51	0.83	0.42	1.23
	Powell & Roberts (2002)	.65	32	.38	30	1.52	0.96	2.08
	Powell et al. (1999) Exp 1	.72	65	.28	62	1.54	1.06	2.02
	Powell et al. (1999) Exp 2	.51	18	.35	18	0.95	0.27	1.62
	Powell et al. (2000)	.65	32	.37	61	2.50	2.03	2.96
	Price & Connolly (2004)	.47	45	.20	45	1.43	0.97	1.89
	Price & Connolly (2007)	.41	43	.18	38	1.57	1.07	2.06
	Price et al. (2006) Exp 1	.68	15	.35	30	1.85	1.13	2.57
	Price et al. (2006) Exp 2	.43	20	.20	57	1.31	0.76	1.85
Int. Intrusion	Connolly et al. (2016) Exp 1	.04	17	.46	48	-2.68	-3.39	-1.96
	Connolly et al. (2016) Exp 2	.03	28	.50	26	-3.97	-4.88	-3.06
	Deane et al. (2017)	.01	50	.22	51	-1.71	-2.17	-1.26
	Price & Connolly (2004)	.00	45	.37	45	-2.00	-2.50	-1.49
	Price & Connolly (2007)	.03	43	.18	38	-1.47	-1.96	-0.99
	Price et al. (2006) Exp 1	.00	15	.28	30	-1.86	-2.58	-1.14
	Price et al. (2006) Exp 2	.08	20	.37	57	-0.86	-1.38	-0.34
Correct + Int. I.	Connolly et al. (2016) Exp 1	.58	17	.91	48	-0.98	-1.54	-0.41
	Connolly et al. (2016) Exp 2	.71	28	.90	26	-1.44	-2.03	-0.85
	Deane et al. (2017)	.71	50	.69	51	0.14	-0.25	0.53
	Price & Connolly (2004)	.47	45	.57	45	-0.37	-0.79	0.04
	Price & Connolly (2007)	.43	41	.36	40	0.42	-0.02	0.85
	Price et al. (2006) Exp 1	.67	15	.64	30	0.15	-0.46	0.75
	Price et al. (2006) Exp 2	.46	20	.58	57	-0.37	-0.88	0.14
Ext. Intrusion	Connolly et al. (2016) Exp 1	.10	17	.08	48	0.21	-0.34	0.76
	Connolly et al. (2016) Exp 2	.09	28	.08	26	0.10	-0.42	0.63
	Connolly & Gordon (2014)	.29	42	.13	82	1.21	0.81	1.61
	Deane et al. (2017)	.07	50	.05	51	0.25	-0.14	0.64
	Powell & Roberts (2002)	.11	32	.04	30	0.80	0.28	1.31
	Powell et al. (1999) Exp 1	.05	65	.02	62	0.47	0.12	0.82
	Powell et al. (1999) Exp 2	.12	18	.02	18	1.34	0.63	2.05
	Powell et al. (2000)	.11	32	.04	61	0.77	0.33	1.21
	Price & Connolly (2004)	.25	45	.12	45	0.89	0.46	1.32
	Price & Connolly (2007)	.13	43	.19	38	-0.37	-0.81	0.07
Don't Know	Connolly et al. (2016) Exp 1	.13	17	.11	48	0.21	-0.34	0.75
	Connolly et al. (2016) Exp 2	.23	28	.08	26	0.99	0.36	1.62
	Deane et al. (2017)	.16	50	.21	51	-0.32	-0.71	0.07
	Powell & Roberts (2002)	.16	32	.18	30	-0.11	-0.60	0.38

	Powell et al. (1999) Exp 1	.13	65	.15	62	-0.13	-0.48	0.21
	Powell et al. (1999) Exp 2	.26	18	.15	18	0.69	0.03	1.35
	Powell et al. (2000)	.16	32	.13	61	0.18	-0.24	0.61
	Price & Connolly (2007)	.18	43	.22	38	-0.22	-0.66	0.21
Suggested Detail	Connolly & Price (2006)	.02	48	.07	48	-0.78	-1.20	-0.37
	Powell & Roberts (2002)	.17	32	.18	30	-0.06	-0.55	0.43
	Powell et al. (1999) Exp 1	.20	65	.10	62	0.60	0.25	0.95
	Powell et al. (1999) Exp 2	.22	18	.13	18	0.39	-0.25	1.04
	Powell et al. (2000)	.17	32	.12	61	0.34	-0.09	0.76
	Price & Connolly (2004)	.02	45	.11	45	-0.74	-1.16	-0.31
	Price & Connolly (2007)	.26	43	.22	38	0.17	-0.26	0.60
	Price et al. (2006) Exp 1	.05	15	.18	30	-0.67	-1.30	-0.05
	Price et al. (2006) Exp 2	.15	20	.34	57	-0.71	-1.23	-0.19

Table A5

Recognition statistics for primary studies

Response type	Study	Event Type				Effect Size & 95% CIs		
		Single		Repeated		<i>g</i>	<i>LL</i>	<i>UL</i>
		Rate	<i>N</i>	Rate	<i>N</i>			
Hit	Connolly & Lindsay (2001) Exp 1	.84	48	.84	48	0.00	-0.40	0.40
	Price & Connolly (2007)	.68	43	.66	38	0.09	-0.34	0.52
	Powell & Roberts (2002)	.89	30	.88	30	0.08	-0.42	0.58
	Powell et al. (1999)	.94	64	.84	63	1.05	0.68	1.41
	Roberts & Powell (2006)	.89	70	.84	60	0.27	-0.08	0.61
	Roberts & Powell (2007)	.91	66	.78	59	0.74	0.38	1.10
False Alarm	Connolly & Lindsay (2001) Exp 1	.69	48	.85	48	-0.25	-0.65	0.15
	Price & Connolly (2007)	.42	43	.58	38	-0.62	-1.07	-0.18
	Powell & Roberts (2002)	.35	30	.52	30	-0.67	-1.19	-0.16
	Powell et al. (1999)	.33	64	.36	63	-0.15	-0.49	0.20
	Roberts & Powell (2006)	.23	70	.24	60	-0.04	-0.39	0.30
	Roberts & Powell (2007)	.32	66	.31	59	0.04	-0.31	0.39
Sensitivity		<i>d'</i>	<i>N</i>	<i>d'</i>	<i>N</i>			
	Connolly & Lindsay (2001) Exp 1	0.50	48	-0.04	48	0.26	-0.14	0.66
	Price & Connolly (2007)	0.67	43	0.20	38	0.26	-0.18	0.69
	Powell & Roberts (2002)	1.64	30	1.12	30	0.24	-0.26	0.75
	Powell et al. (1999)	1.97	63	1.36	63	0.28	-0.07	0.63
	Roberts & Powell (2006)	1.96	60	1.71	60	0.12	-0.23	0.46
Roberts & Powell (2007)	1.79	59	1.24	59	0.27	-0.08	0.62	
Response Bias		<i>c</i>	<i>N</i>	<i>c</i>	<i>N</i>			
	Connolly & Lindsay (2001) Exp 1	-0.75	48	-1.02	48	0.26	-0.14	0.66
	Price & Connolly (2007)	-0.12	43	-0.30	38	0.20	-0.23	0.63
	Powell & Roberts (2002)	-0.43	30	-0.61	30	0.18	-0.32	0.68
	Powell et al. (1999)	-0.55	63	-0.33	63	-0.21	-0.55	0.14
	Roberts & Powell (2006)	-0.22	60	-0.15	60	-0.07	-0.41	0.27
Roberts & Powell (2007)	-0.42	59	-0.14	59	-0.28	-0.63	0.07	