Supporting Information for: Montero-Melis, G., Jaeger, F., & Bylund, E. Thinking is modulated by recent linguistic experience: Second language priming affects perceived event similarity. Article accepted in *Language Learning* on 24 December 2015.

Appendix S1: Stimulus Description and Priming Sentences

Description of target stimuli and corresponding priming sentences for the primed conditions.

Item	Path	Manner	Direction	Object	Ground	Manner-priming sentence[1]	Path-priming sentence
1	down	push + slide	right-left	suitcase	hill	El hombre empuja un sofá por una rampa. ('The man pushes a sofa along a ramp.')	El hombre baja una rampa con un sofá. ('The man descends a ramp with a sofa.')
2	down	push + slide	left-right	suitcase	snowy hill	El chico empuja una piedra por una pendiente. ('The boy pushes a stone along a slope.')	El chico baja una pendiente con una piedra. ('The boy descends a slope with a stone.')
3	into	push + slide	right-left	table	cave	El empleado empuja un armario por un almacén. ('The employee pushes a cupboard in a warehouse.')	El empleado entra en un almacén con un armario. ('The employee enters a warehouse with a cupboard.')
4	into	push + slide	left-right	table	house	El informático empuja un ordenador por un cuarto. ('The computer technician pushes a computer in a room.')	El informático entra en un cuarto con un ordenador. ('The computer technician enters a room with a computer.')

[1] Note that the Spanish preposition *por* is used in all manner-priming sentences. This preposition is semantically underspecified compared to typical English path prepositions and satellites; it can denote motion inside a location (e.g., item 3) as well as motion along a landmark (e.g., item 1). English translations are difficult to render using the same preposition for all items. We have therefore opted for alternating between different translations of *por* to make the sentences more intelligible, even though we are fully aware that the English translations are not idiomatic, precisely because both path and manner information are typically expressed in English.

Item	Path	Manner	Direction	Object	Ground	Manner-priming sentence[1]	Path-priming sentence
5	up	push + slide	left-right	package	dune	El señor empuja una televisión por unos escalones. (‘The man pushes a television along some steps.’)	El señor sube unos escalones con una televisión. (‘The man ascends some steps with a television.’)
6	up	push + slide	right-left	package	roof	La moza empuja un sillón por un repecho. (‘The young girl pushes an armchair along a slope.’)	La moza sube un repecho con un sillón. (‘The young girl ascends a slope with an armchair.’)
7	across	push + slide	left-right	basket	road	El niño empuja una papelera por una habitación. (‘The boy pushes a basket in a bedroom.’)	El niño cruza una habitación con una papelera. (‘The boy crosses a bedroom with a basket.’)
8	across	push + slide	right-left	basket	street	El bombero empuja un piano por un pasillo. (‘The fireman pushes a piano along a hallway.’)	El bombero cruza un pasillo con un piano. (‘The fireman crosses a hallway with a piano.’)
9	down	push + roll	right-left	balloon	hill	La niña rueda un plato por una cuesta. (‘The girl rolls a plate along a slope.’)	La niña baja una cuesta con un plato. (‘The girl descends a slope with a plate.’)
10	down	push + roll	left-right	balloon	snowy hill	El camarero rueda un barril por unos peldaños. (‘The waiter rolls a keg along some steps.’)	El camarero baja unos peldaños con un barril. (‘The waiter descends some steps with a keg.’)
11	into	push + roll	left-right	tire	cave	La joven rueda un aro por un gimnasio. (‘The girl rolls a hoop in a gym.’)	La joven entra en un gimnasio con un aro. (‘The girl enters a gym with a hoop.’)

Item	Path	Manner	Direction	Object	Ground	Manner-priming sentence[1]	Path-priming sentence
12	into	push + roll	right-left	tire	house	La chiquilla rueda un hula hoop por un aula. (‘The little girl rolls a hula hoop in a classroom.’)	La chiquilla entra en un aula con un hula hoop. (‘The little girl enters a classroom with a hula hoop.’)
13	up	push + roll	left-right	swimming ring	dune	El escarabajo rueda una pelota por un montículo. (‘The beetle rolls a ball along a mound.’)	El escarabajo sube un montículo con una pelota. (‘The beetle ascends a mound with a ball.’)
14	up	push + roll	right-left	swimming ring	roof	El leñador rueda un tronco por una loma. (‘The lumberjack rolls a log along a hill.’)	El leñador sube una loma con un tronco. (‘The lumberjack ascends a hill with a log.’)
15	across	push + roll	left-right	cartwheel	road	El mozo rueda una esfera por una plaza. (‘The young boy rolls a sphere/ball on a square.’)	El mozo cruza una plaza con una esfera. (‘The young boy crosses a square with a sphere/ball.’)
16	across	push + roll	right-left	cartwheel	street	El borracho rueda una botella por una avenida. (‘The drunkard rolls a bottle along an avenue.’)	El borracho cruza una avenida con una botella. (‘The drunkard crosses an avenue with a bottle.’)
17	down	pull + slide	left-right	trunk	hill	El conserje arrastra un colchón por una escalinata. (‘The concierge drags a mattress along a staircase.’)	El conserje baja una escalinata con un colchón. (‘The concierge descends a staircase with a mattress.’)
18	down	pull + slide	right-left	trunk	snowy hill	El obrero arrastra un tablón por unas gradas. (‘The labourer drags a board along a grandstand.’)	El obrero baja unas gradas con un tablón. (‘The labourer descends a grandstand with a board.’)

Item	Path	Manner	Direction	Object	Ground	Manner-priming sentence[1]	Path-priming sentence
19	into	pull + slide	right-left	chair	cave	La mujer arrastra una cómoda por un vestíbulo. (‘The woman drags a chest in a hall.’)	La mujer entra en un vestíbulo con una cómoda. (‘The woman enters a hall with a chest.’)
20	into	pull + slide	left-right	chair	house	El vendedor arrastra una lámpara por un local. (‘The sales agent drags a lamp in a store.’)	El vendedor entra en un local con una lámpara. (‘The sales enters a store with a lamp.’)
21	up	pull + slide	left-right	sack	dune	La hormiga arrastra una hoja por una roca. (‘The ant drags a leaf along a rock.’)	La hormiga sube una roca con una hoja. (‘The ant ascends a rock with a leaf.’)
22	up	pull + slide	right-left	sack	roof	El explorador arrastra un trineo por un desnivel. (‘The explorer drags a sleigh along a slope.’)	El explorador sube un desnivel con un trineo. (‘The explorer ascends a slope with a sleigh.’)
23	across	pull + slide	right-left	rocking horse	road	La anciana arrastra una alfombra por una sala. (‘The old lady drags a rug in a living room.’)	La anciana cruza una sala con una alfombra. (‘The old lady crosses a living room with a rug.’)
24	across	pull + slide	left-right	rocking horse	street	El campesino arrastra un palo por una parcela. (‘The peasant drags a stick along a plot.’)	El campesino cruza una parcela con un palo. (‘The peasant crosses a plot with a stick.’)
25	down	pull + roll	left-right	wheelbarrow	hill	La muchacha tira de una bicicleta por una costana. (‘The young girl draws a bicycle along a steep road.’)	La muchacha baja una costana con una bicicleta. (‘The young girl descends a steep road with a bicycle.’)

Item	Path	Manner	Direction	Object	Ground	Manner-priming sentence[1]	Path-priming sentence
26	down	pull + roll	right-left	wheelbarrow	snowy hill	El muchacho tira de una moto por un cerro. (‘The young boy draws a motorbike along a hill.’)	El muchacho baja un cerro con una moto. (‘The young boy descends a hill with a motorbike.’)
27	into	pull + roll	left-right	shopping trolley	cave	El chiquillo tira de un patinete por un jardín. (‘The kid draws a scooter in a garden.’)	El chiquillo entra en un jardín con un patinete. (‘The kid enters a garden with a scooter.’)
28	into	pull + roll	right-left	shopping trolley	house	El nene tira de un triciclo por una escuela. (‘The little child draws a tricycle in a school.’)	El nene entra en una escuela con un triciclo. (‘The little child enters a school with a tricycle.’)
29	up	pull + roll	left-right	toy car	dune	La pasajera tira de un bolso con ruedas por una pasarela. (‘The passenger draws a rolling bag along a gangway.’)	La pasajera sube una pasarela con un bolso con ruedas. (‘The passenger ascends a gangway with a rolling bag.’)
30	up	pull + roll	right-left	toy car	roof	La labradora tira de un carro por un collado. (‘The farmer draws a cart along a hillock.’)	La labradora sube un collado con un carro. (‘The farmer ascends a hillock with a cart.’)
31	across	pull + roll	right-left	stroller	road	El labrador tira de una carreta por un puente. (‘The farmer draws a wagon along a bridge.’)	El labrador cruza un puente con una carreta. (‘The farmer crosses a bridge with a wagon.’)
32	across	pull + roll	left-right	stroller	street	El joven tira de un monopatín por una vía. (‘The young man draws a skateboard along a road.’)	El joven cruza una vía con un monopatín. (‘The young man crosses a road with a skateboard.’)

Appendix S2: Output of Mixed Effects Model (Primed Conditions)

Output of mixed-effects model used to analyse the similarity arrangement task from the two primed conditions: Coefficient estimates β, standard errors SE(β), associated t value, and significance values.

Predictor	Coef. β	SE(β)	t	
(Intercept)	0.52	0.01	87.75	***
Same-Ground (Gr)	0.02	0.01	1.77	.
Same-Object (Ob)	0.06	0.02	2.93	**
Same-Direction (Di)	0.06	0.02	2.65	**
Same-Path (P)	0.19	0.03	6.33	***
Same-Manner (M)	0.12	0.02	4.97	***
Block1_vs_2	0.01	0.01	2.47	*
Block2_vs_3	0.00	0.00	-0.57	
Prime Condition (manner vs. path primed)	0.01	0.01	0.72	
Gr × Block1_vs_2	0.00	0.01	-0.56	
Gr × Block2_vs_3	0.00	0.01	-0.07	
Ob × Block1_vs_2	0.00	0.01	-0.10	
Ob × Block2_vs_3	-0.04	0.01	-2.84	**
Di × Block1_vs_2	-0.03	0.00	-7.55	***
Di × Block2_vs_3	0.00	0.00	-0.32	
P × Block1_vs_2	0.02	0.02	0.97	
P × Block2_vs_3	0.02	0.01	1.16	
M × Block1_vs_2	-0.03	0.03	-1.30	
M × Block2_vs_3	0.02	0.01	1.42	
Gr × Prime Condition	-0.02	0.02	-1.17	
Ob × Prime Condition	0.04	0.03	1.24	
Di × Prime Condition	-0.06	0.04	-1.38	
P × Prime Condition	-0.11	0.06	-1.81	.
M × Prime Condition	0.11	0.05	2.42	*
Block1_vs_2 × Prime Condition	0.00	0.01	0.44	
Block2_vs_3 × Prime Condition	0.00	0.01	-0.45	
Gr × Block1_vs_2 × Prime Condition	0.01	0.02	0.31	
Gr × Block2_vs_3 × Prime Condition	-0.02	0.02	-0.88	
Ob × Block1_vs_2 × Prime Condition	0.04	0.03	1.51	

Predictor	Coef. β	SE(β)	t	
Ob × Block2_vs_3 × Prime Condition	-0.04	0.03	-1.71	.
Di × Block1_vs_2 × Prime Condition	0.00	0.01	0.23	
Di × Block2_vs_3 × Prime Condition	0.00	0.01	-0.33	
P × Block1_vs_2 × Prime Condition	-0.07	0.05	-1.44	
P × Block2_vs_3 × Prime Condition	0.04	0.03	1.27	
M × Block1_vs_2 × Prime Condition	0.03	0.05	0.62	
M × Block2_vs_3 × Prime Condition	0.02	0.02	0.70	

See Table 4 in main text for factor levels, coding schemes and model formula. Significance estimates for the interactions of Block with Object, Ground or Direction are likely to be inaccurate, because these interactions did not enter the model as random by-subject slopes. Therefore the SE(β) is likely to be underestimated, leading to inflated significance values. . $p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$.

Appendix S3: Output of Mixed Effects Model (All Conditions)

Output of mixed-effects model used to analyse the similarity arrangement task for all three priming conditions, including the control condition: Coefficient estimates β, standard errors SE(β), associated *t* value, and significance values.

Predictor	Coef. β	SE(β)	*t*	
(Intercept)	0.52	0.00	111.05	***
Same-Ground (Gr)	0.03	0.01	2.32	*
Same-Object (Ob)	0.07	0.02	3.95	***
Same-Direction (Di)	0.05	0.02	2.85	**
Same-Path (P)	0.20	0.02	8.61	***
Same-Manner (M)	0.10	0.02	5.66	***
Block 1_vs_2	0.01	0.01	2.47	*
Block 2_vs_3	0.00	0.00	-0.20	
Prime Cond P_vs_C (Path-primed vs Control)	-0.01	0.01	-0.54	
Prime Cond C_vs_M (Control vs Manner-primed)	0.00	0.01	-0.24	
Gr x Block 1_vs_2	0.01	0.01	1.46	
Gr x Block 2_vs_3	0.01	0.01	1.34	
Ob x Block 1_vs_2	-0.01	0.01	-0.49	
Ob x Block 2_vs_3	-0.03	0.01	-3.06	**
Di x Block 1_vs_2	-0.02	0.00	-7.79	***
Di x Block 2_vs_3	0.00	0.00	-1.34	
P x Block 1_vs_2	0.01	0.02	0.71	
P x Block 2_vs_3	0.01	0.02	0.61	
M x Block 1_vs_2	-0.03	0.02	-1.71	.
M x Block 2_vs_3	0.01	0.01	0.57	
Gr x Prime Cond P_vs_C	-0.01	0.02	-0.63	
Gr x Prime Cond C_vs_M	0.03	0.02	1.73	.
Ob x Prime Cond P_vs_C	-0.06	0.03	-2.06	*
Ob x Prime Cond C_vs_M	0.03	0.03	0.89	
Di x Prime Cond P_vs_C	0.07	0.04	1.94	.
Di x Prime Cond C_vs_M	-0.01	0.04	-0.37	
P x Prime Cond P_vs_C	0.02	0.06	0.29	
P x Prime Cond C_vs_M	0.09	0.05	1.65	.
M x Prime Cond P_vs_C	-0.01	0.04	-0.31	

Predictor	Coef. β	SE(β)	t	
M x Prime Cond C_vs_M	-0.10	0.04	-2.46	*
Block 1_vs_2 x Prime Cond P_vs_C	0.00	0.01	-0.04	
Block 2_vs_3 x Prime Cond P_vs_C	0.00	0.01	-0.28	
Block 1_vs_2 x Prime Cond C_vs_M	0.00	0.01	-0.33	
Block 2_vs_3 x Prime Cond C_vs_M	0.01	0.01	0.71	
Gr x Block 1_vs_2 x Prime Cond P_vs_C	-0.05	0.02	-2.74	**
Gr x Block 2_vs_3 x Prime Cond P_vs_C	-0.02	0.02	-1.21	
Gr x Block 1_vs_2 x Prime Cond C_vs_M	0.04	0.02	2.47	*
Gr x Block 2_vs_3 x Prime Cond C_vs_M	0.04	0.02	2.13	*
Ob x Block 1_vs_2 x Prime Cond P_vs_C	-0.01	0.03	-0.39	
Ob x Block 2_vs_3 x Prime Cond P_vs_C	0.01	0.03	0.52	
Ob x Block 1_vs_2 x Prime Cond C_vs_M	-0.03	0.03	-1.14	
Ob x Block 2_vs_3 x Prime Cond C_vs_M	0.03	0.03	1.15	
Di x Block 1_vs_2 x Prime Cond P_vs_C	-0.01	0.01	-1.76	.
Di x Block 2_vs_3 x Prime Cond P_vs_C	0.01	0.01	1.30	
Di x Block 1_vs_2 x Prime Cond C_vs_M	0.01	0.01	1.57	
Di x Block 2_vs_3 x Prime Cond C_vs_M	-0.01	0.01	-1.00	
P x Block 1_vs_2 x Prime Cond P_vs_C	0.06	0.05	1.21	
P x Block 2_vs_3 x Prime Cond P_vs_C	0.00	0.04	-0.06	
P x Block 1_vs_2 x Prime Cond C_vs_M	0.00	0.05	0.09	
P x Block 2_vs_3 x Prime Cond C_vs_M	-0.03	0.04	-0.80	
M x Block 1_vs_2 x Prime Cond P_vs_C	-0.02	0.05	-0.39	
M x Block 2_vs_3 x Prime Cond P_vs_C	0.02	0.03	0.59	
M x Block 1_vs_2 x Prime Cond C_vs_M	-0.01	0.05	-0.29	
M x Block 2_vs_3 x Prime Cond C_vs_M	-0.03	0.03	-1.12	

See Table 4 in main text for factor levels, coding schemes and model formula. Significance estimates for the interactions of Block with Object, Ground or Direction are likely to be inaccurate, because these interactions did not enter the model as random by-subject slopes. Therefore the SE(β) is likely to be underestimated, leading to inflated significance values. . $p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$.