Supplementary materials (Set A): Statistical analyses for Experiments 1 and 2

Table A1. Summary of statistics on postcedent choices by L1 Chinese speakers in Experiment 1 (*: < 0.05).

	β	SE	t	p
Constraint	2.58	0.27	9.40	< 0.001*
Gender	-1.14	0.13	-9.08	< 0.001*
Gender x Constraint	0.44	0.25	1.75	0.08

Table A2. Summary of statistics on raw RTs for L1 Chinese speakers untill the second spillover region in Experiment 1 (*: < 0.05).

Region	Word	Constraint				Gender				Constraint x Gender			
		β	SE	t	p	β	SE	t	p	β	SE	t	p
1	At	-5.20	8.24	-0.63	0.53	-28.24	8.25	-3.43	< 0.001*	24.60	16.48	1.49	0.14
2	take	-1.49	6.23	-0.24	0.81	3.66	7.13	0.51	0.61	-0.78	12.46	-0.06	0.95
3	pro (NP)	-62.42	11.01	-5.67	< 0.001*	1.98	11.03	0.18	0.86	30.56	22.04	1.39	0.17
4	to school	-57.20	9.76	-5.86	< 0.001*	26.15	9.77	2.68	< 0.01*	-9.34	19.50	-0.48	0.63
5	while	-56.29	12.74	-4.42	< 0.001*	5.80	12.77	0.45	0.65	-38.91	25.48	-1.53	0.13
6	Liqiang	-38.59	17.52	-2.20	< 0.05*	-6.80	17.53	-0.39	0.70	63.79	35.01	1.82	0.07
7	casually	-20.64	10.53	-1.96	0.05	6.51	10.55	0.62	0.54	81.48	21.05	3.87	< 0.001*
8	told	-2.34	6.32	-0.37	0.71	-5.94	6.33	-0.94	0.35	53.23	12.65	4.21	< 0.001*

Table A3. Summary of statistics on postcedent choices in the between-group analysis in Experiment 2 (*: < 0.05).

	β	SE	t	p
Constraint	2.35	0.08	29.45	< 0.001*
Gender	-0.89	0.08	-11.79	< 0.001*
Group	0.27	0.13	2.15	0.03*
Gender x Constraint	0.67	0.15	4.48	< 0.001*
Constraint x Group	-0.48	0.15	-3.16	0.002*
Gender x Group	-0.17	0.15	-1.15	0.25
Constraint x Gender x Group	0.50	0.30	1.66	0.10

Table A4. Summary of statistics for the between-group analysis on raw RTs at the critical and spillover regions in Experiment 2 (*: p < 0.05).

	Critical region				1st spillover region				2nd spillover region			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Constraint	26.84	10.79	2.49	0.01*	12.67	6.88	1.84	0.07	15.38	5.95	2.59	< 0.01*
Gender	-21.59	9.93	-2.17	0.03*	-3.42	7.28	-0.47	0.64	-7.82	5.96	-1.31	0.19
Group	-137.82	31.59	-4.36	< 0.001*	-142.15	22.16	-6.41	< 0.001*	-102.31	19.24	-5.32	< 0.001*
Constraint x Gender	44.78	19.83	2.26	0.02*	73.11	13.75	5.32	< 0.001*	44.60	11.90	3.75	< 0.001*
Constraint x Group	-109.53	21.58	-5.08	< 0.001*	-71.57	13.75	-5.20	< 0.001*	-73.64	11.90	-6.19	< 0.001*
Gender x Group	-19.41	19.84	-0.98	0.33	-29.80	14.55	-2.05	0.04*	-27.13	11.90	-2.28	0.02*
Constraint x Gender x Group	-29.45	39.66	-0.74	0.46	-21.34	27.50	-0.78	0.44	14.19	23.79	0.60	0.55

Table A5. Summary of statistics on postcedent choices by L1 English speakers in Experiment 2 (*: < 0.05).

	β	SE	t	p
Constraint	2.43	0.22	11.30	< 0.001*
Gender	-0.98	0.11	-8.99	< 0.001*
Gender x Constraint	0.72	0.22	3.28	0.001*

Table A6. Summary of statistics on raw RTs for L1 English speakers untill the second spillover region in Experiment 2 (*: < 0.05).

		Constraint				Gender				Constraint x Gender			
Region	Word	β	SE	t	p	β	SE	t	p	β	SE	t	p
1	While	9.93	7.06	1.41	0.16	8.39	7.06	1.19	0.24	-3.60	14.12	-0.26	0.80
2	driving	12.02	7.74	1.55	0.12	6.69	6.81	0.98	0.33	17.62	13.61	1.29	0.20
3	pro (NP)	-58.88	11.33	-5.20	< 0.001*	4.87	6.63	0.74	0.46	32.43	13.25	2.45	0.01*
4	to	-63.02	6.79	-9.28	< 0.001*	8.13	6.80	1.20	0.23	18.66	13.59	1.37	0.17
5	school,	-11.88	10.19	-1.17	0.24	3.79	10.18	0.37	0.71	34.03	20.37	1.67	0.09
6	Mike	-29.32	11.18	-2.62	0.01*	-30.93	10.76	-2.88	< 0.005*	29.48	21.51	1.37	0.17
7	casually	-22.89	6.76	-3.39	< 0.001*	-18.54	7.07	-2.62	0.01*	62.27	13.52	4.60	< 0.001*
8	told	-21.60	6.64	-3.25	< 0.005*	-21.33	5.94	-3.59	< 0.001*	51.84	11.89	4.36	< 0.001*

Table A7. Summary of statistics on postcedent choices by L2 English speakers in Experiment 2 (*: < 0.05).

	β	SE	t	p
Constraint	2.62	0.12	22.06	< 0.001*
Gender	-0.82	0.11	-7.49	< 0.001*
Gender x Constraint	0.43	0.22	1.99	< 0.05*

Table A8. Summary of statistics on raw RTs for L2 English speakers untill the second spillover region in Experiment 2 (*: < 0.05).

Region	Word	Constraint				Gender				Constraint x Gender			
		β	SE	t	p	β	SE	t	p	β	SE	t	p
1	While	-7.88	8.53	-0.92	0.36	-1.94	8.53	-0.23	0.82	-7.52	17.06	-0.44	0.66
2	driving	28.65	11.08	2.59	<0.01*	4.88	14.06	0.35	0.73	12.76	22.15	0.58	0.56
3	pro (NP)	-248.09	13.87	-17.88	< 0.001*	12.69	13.91	0.91	0.36	-42.77	27.75	-1.54	0.12
4	to	-56.08	7.79	-7.20	< 0.001*	4.67	7.82	0.60	0.55	-21.85	15.58	-1.40	0.16
5	school,	-10.83	18.65	-0.58	0.56	25.32	18.72	1.35	0.18	-57.10	37.29	-1.53	0.13
6	Mike	82.56	19.19	4.30	< 0.001*	-12.95	20.44	-0.63	0.53	60.26	33.01	1.83	0.07
7	casually	48.68	13.84	3.52	< 0.001*	12.19	11.98	1.02	0.31	83.93	23.91	3.51	< 0.001*
8	told	52.25	10.26	5.09	< 0.001*	5.87	10.66	0.55	0.58	37.10	20.52	1.81	0.07

Table A9. Summary of statistics for proficiency analysis on raw RTs at critical and spillover regions in Experiment 2 with L2 English speakers (*: < 0.05).

Critical region	β	SE	t	p
Proficiency	33.45	22.89	1.46	0.15
Gender	-16.43	17.75	-0.93	0.35
Constraint	79.94	17.63	4.54	<0.001*
Proficiency × Gender	0.91	17.69	0.05	0.96
Proficiency × Constraint	47.61	17.72	2.69	0.007*
Gender × Constraint	63.58	35.22	1.81	0.07
Proficiency × Gender × Constraint	13.60	35.42	0.38	0.70

1st spillover region	β	SE	t	p
Proficiency	4.07	16.66	0.24	0.81
Gender	11.19	12.71	0.88	0.38
Constraint	47.37	12.60	3.76	<0.005*
Proficiency × Gender	-15.43	12.60	-1.22	0.22
Proficiency × Constraint	-4.30	12.63	-0.34	0.73
Gender × Constraint	83.37	25.19	3.31	<0.001*
Proficiency × Gender × Constraint	47.31	25.26	1.87	0.06

2nd spillover region	β	SE	t	p
Proficiency	13.09	12.73	1.03	0.31
Gender	3.13	10.78	0.29	0.77
Constraint	48.59	10.66	4.56	<0.001*
Proficiency × Gender	-5.13	10.62	-0.48	0.63
Proficiency × Constraint	-3.75	10.65	-0.35	0.73
Gender × Constraint	33.47	21.31	1.57	0.12
Proficiency × Gender × Constraint	5.73	21.28	0.27	0.79

Session analysis on raw RTs in self-paced reading experiments

Table B1. Summary of statistics for session analysis on raw RTs at critical and spillover regions in Experiment 1 with L1 Chinese speakers (*: < 0.05).

First half of trials

	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-58.72	25.88	-2.27	0.02*	-1.23	25.85	-0.05	0.96	87.61	51.50	1.70	0.09
1st spillover	-35.37	15.14	-2.34	0.02*	5.34	15.16	0.35	0.72	72.79	30.19	2.41	0.02*
2nd spillover	8.70	8.95	0.97	0.33	-7.89	8.96	-0.88	0.38	67.13	17.85	3.76	<0.001*

Second half of trials

	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-17.41	23.68	-0.74	0.46	4.91	23.74	0.21	0.84	8.89	47.32	0.19	0.85
1st spillover	-7.73	14.74	-0.52	0.60	9.53	14.75	0.65	0.52	70.43	29.39	2.40	0.02*
2nd spillover	-10.55	9.16	-1.15	0.25	-6.32	9.13	-0.69	0.49	28.90	18.18	1.59	0.11

Table B2. Summary of statistics for session analysis on raw RTs at critical and spillover regions in Experiment 2 with L1 English speakers (*: < 0.05).

First half of trials

	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-30.58	15.70	-1.95	0.05	-31.21	15.72	-1.99	<0.05*	8.96	31.27	0.29	0.77
1st spillover	-20.85	10.01	-2.08	0.04*	-17.48	10.02	-1.74	0.08	59.29	19.94	2.97	<0.005*
2nd spillover	-21.70	8.83	-2.46	0.01*	-27.80	8.83	-3.15	0.002*	76.68	17.62	4.35	<0.001*

Second half of trials

	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-24.59	-1.66	0.10	-40.96	-40.96	14.85	-2.76	0.006*	37.67	29.56	1.27	0.20
1st spillover	-18.14	8.94	-2.03	0.04*	-25.11	8.89	-2.82	<0.005*	62.16	17.75	3.50	<0.001*
2nd spillover	-21.46	8.80	-2.44	0.02*	-20.94	8.05	-2.60	<0.01*	27.02	16.05	1.68	0.09

Table B3. Summary of statistics for session analysis on raw RTs at critical and spillover regions in Experiment 2 with L2 English speakers (*: < 0.05).

	First half of trials											
	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	80.81	23.51	3.44	<0.001*	7.04	23.55	0.30	0.77	7.87	46.92	0.17	0.87
1st spillover	76.31	17.44	4.38	<0.001*	1.48	17.45	0.09	0.93	102.03	34.86	2.93	<0.005*
2nd spillover	43.54	15.16	2.87	<0.005*	7.02	15.14	0.46	0.64	77.22	30.16	2.56	0.01*
	Second half of trials											
	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	79.35	24.97	3.18	0.002*	-33.87	25.05	-1.35	0.18	110.58	49.93	2.22	0.03*
1st spillover	24.49	17.05	1.44	0.15	14.91	17.09	0.87	0.38	77.98	34.02	2.29	0.02*
2nd spillover	53.03	14.34	3.70	<0.005*	0.71	14.40	0.05	0.96	9.08	28.68	0.32	0.75

Session analysis on log-transformed RTs in self-paced reading experiments

Table B4. Summary of statistics for session analysis on log-transformed RTs at critical and spillover regions in Experiment 1 with L1 Chinese speakers (*: < 0.05).

	First half of trials											
	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-0.06	0.03	-2.21	0.03*	0.02	0.03	0.68	0.50	0.07	0.06	1.14	0.25
1st spillover	-0.05	0.02	-2.05	0.04*	0.005	0.02	0.23	0.82	0.12	0.04	2.62	0.009*
2nd spillover	0.02	0.02	1.24	0.22	-0.02	0.02	-0.96	0.34	0.13	0.03	3.98	<0.001*
	Second half of trials											
	Constraint				Gender				Constraint × Gender			
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-0.04	0.03	-1.28	0.20	-0.002	0.03	-0.07	0.94	-0.06	0.06	-1.07	0.29
1st spillover	-0.03	0.02	-1.38	0.17	0.007	0.02	0.31	0.76	0.11	0.05	2.31	0.02*
2nd spillover	-0.02	0.02	-1.22	0.22	-0.005	0.02	-0.28	0.78	0.07	0.04	2.04	0.04*

Table B5. Summary of statistics for session analysis on log-transformed RTs at critical and spillover regions in Experiment 2 with L1 English speakers (*: < 0.05).

	Constraint				Gender				Constraint × Gender			
First half of trials												
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-0.03	0.02	-1.54	0.12	0.0001	0.02	0.005	0.99	0.01	0.04	0.32	0.75
1st spillover	-0.06	0.02	-3.02	0.002*	-0.03	0.02	-1.56	0.12	0.10	0.04	2.56	0.01*
2nd spillover	-0.04	0.02	-1.99	<0.05*	-0.05	0.02	-2.78	0.006*	0.14	0.03	3.96	<0.001*
Second half of trials												
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	-0.02	0.02	-0.91	0.36	-0.03	0.02	-1.21	0.23	0.05	0.04	1.23	0.22
1st spillover	-0.06	0.02	-3.11	0.002*	-0.06	0.02	-3.35	<0.001*	0.09	0.04	2.62	0.009*
2nd spillover	-0.04	0.02	-2.19	0.03*	-0.04	0.02	-2.18	0.03*	0.08	0.03	2.46	0.01*

Table B6. Summary of statistics for session analysis on log-transformed RTs at critical and spillover regions in Experiment 2 with L2 English speakers (*: < 0.05).

	Constraint				Gender				Constraint × Gender			
First half of trials												
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	0.08	0.03	2.49	0.01*	-0.004	0.03	-0.15	0.88	-0.02	0.05	-0.34	0.73
1st spillover	0.10	0.02	4.33	<0.001*	-0.002	0.02	-0.08	0.94	0.11	0.05	2.44	0.01*
2nd spillover	0.06	0.02	2.70	<0.01*	0.01	0.02	0.44	0.66	0.10	0.04	2.54	0.01*
Second half of trials												
	β	SE	t	p	β	SE	t	p	β	SE	t	p
Critical region	0.05	0.03	1.91	0.06	-0.04	0.03	-1.25	0.21	0.10	0.06	1.77	0.08
1st spillover	0.03	0.02	1.08	0.28	0.007	0.02	0.30	0.77	0.07	0.05	1.41	0.16
2nd spillover	0.07	0.02	3.14	0.002*	0.007	0.02	0.32	0.75	0.02	0.04	0.05	0.96

Supplementary materials (Set C): Log-transformed RT analyses for self-paced reading experiments

Table C1. Summary of statistics for log-transformed RTs untill the second spillover region in Experiment 1 (*: < 0.05).

Region	Word	Constraint β	SE	t	p	Gender β	SE	t	p	Constraint x Gender β	SE	t	p
1	At	-0.002	0.01	-0.12	0.90	-0.04	0.01	-3.09	0.002*	0.05	0.03	1.86	0.06
2	take	0.002	0.01	0.11	0.91	0.00003	0.01	0.002	0.99	0.02	0.03	0.74	0.46
3	pro (NP)	-0.11	0.02	-6.37	< 0.001*	-0.004	0.02	-0.23	0.82	0.03	0.03	0.86	0.39
4	to school	-0.09	0.02	-4.40	< 0.001*	0.03	0.02	1.98	<0.05*	-0.006	0.03	-0.18	0.86
5	while	-0.08	0.02	-4.33	< 0.001*	0.008	0.02	0.44	0.66	-0.04	0.04	-0.99	0.32
6	Liqiang	-0.05	0.02	-2.42	0.02*	-0.003	0.02	-0.15	0.88	0.03	0.04	0.79	0.42
7	casually	-0.04	0.02	-2.18	0.03*	0.006	0.02	0.35	0.73	0.14	0.03	4.17	< 0.001*
8	told	-0.004	0.01	-0.28	0.78	-0.01	0.01	-0.77	0.44	0.11	0.02	4.74	< 0.001*

Table C2. Summary of statistics for the between-group analysis on log-transformed RTs at the critical and spillover regions in Experiment 2 (*: < 0.05).

	Critical region β	SE	t	p	1st spillover region β	SE	t	p	2nd spillover region β	SE	t	p
Constraint	0.02	0.01	1.54	0.13	-0.006	0.01	-0.56	0.57	0.01	0.01	1.31	0.19
Gender	-0.005	0.01	-40	0.69	-0.01	0.01	-1.14	0.26	-0.01	0.01	-1.05	0.29
Group	-0.20	0.05	-4.03	< 0.001*	-0.25	0.04	-5.77	< 0.001*	-0.21	0.04	-5.08	< 0.001*
Constraint x Gender	0.03	0.02	1.14	0.26	0.10	0.02	4.51	< 0.001*	0.09	0.02	4.59	< 0.001*
Constraint x Group	-0.09	0.03	-3.74	< 0.001*	-0.11	0.02	-4.96	< 0.001*	-0.10	0.02	-4.84	< 0.001*
Gender x Group	0.0002	0.02	0.01	0.99	-0.05	0.02	-2.21	0.03*	-0.05	0.02	-2.44	0.01*
Constraint x Gender x Group	0.02	0.05	0.47	0.64	-0.01	0.04	0.23	0.82	0.04	0.04	0.95	0.34

Table C3. Summary of statistics for log-transformed RTs untill the second spillover region for English native speakers in Experiment 2 (*: < 0.05).

Region	Word	Constraint				Gender				Constraint x Gender			
		β	SE	t	p	β	SE	t	p	β	SE	t	p
1	While	0.02	0.01	1.17	0.30	0.006	0.01	0.49	0.62	-0.02	0.02	-1.06	0.29
2	driving	0.04	0.02	2.74	0.01*	0.005	0.01	0.38	0.70	0.01	0.02	0.50	0.62
3	pro (NP)	-0.10	0.02	-5.53	< 0.001*	0.003	0.01	0.27	0.79	0.05	0.03	2.13	0.03*
4	to	-0.14	0.01	-11.95	< 0.001*	0.02	0.01	1.71	0.09	-0.007	0.02	-0.29	0.77
5	school,	-0.02	0.01	-1.73	0.08	0.001	0.01	0.08	0.94	0.02	0.03	0.66	0.51
6	Mike	-0.03	0.02	-1.89	0.06	-0.005	0.02	-0.30	0.77	0.04	0.03	1.30	0.19
7	casually	-0.06	0.01	-4.53	< 0.001*	-0.04	0.01	-2.92	0.004*	0.10	0.03	3.89	< 0.001*
8	told	-0.04	0.01	-2.99	0.003*	-0.04	0.01	-2.96	0.003*	0.11	0.02	4.65	< 0.001*

Table C4. Summary of statistics for log-transformed RTs untill the second spillover region for English L2 speakers in Experiment 2 (*: < 0.05).

Region	Word	Constraint				Gender				Constraint x Gender			
		β	SE	t	p	β	SE	t	p	β	SE	t	p
1	While	-0.02	0.01	-1.21	0.23	0.002	0.01	0.15	0.88	-0.02	0.03	-0.67	0.50
2	driving	0.02	0.02	1.26	0.21	-0.004	0.02	-0.24	0.81	0.001	0.03	0.03	0.98
3	pro (NP)	-0.31	0.02	-17.89	< 0.001*	0.01	0.02	0.77	0.44	-0.02	0.03	-0.64	0.52
4	to	-0.13	0.01	-8.50	< 0.001*	-0.002	0.01	-0.12	0.90	-0.04	0.03	-1.27	0.20
5	school,	-0.03	0.02	-1.27	0.21	0.01	0.02	0.62	0.54	-0.03	0.04	-0.78	0.43
6	Mike	0.07	0.02	3.42	< 0.001*	-0.006	0.02	-0.31	0.76	0.02	0.04	0.45	0.65
7	casually	0.05	0.02	2.77	0.006*	0.01	0.02	0.70	0.49	0.09	0.03	2.71	0.007*
8	told	0.06	0.02	3.89	< 0.001*	0.01	0.02	0.90	0.37	0.07	0.03	2.25	0.02*