**Online Supplement 1:** 

**Experimental Materials** 

## Appendix A

Experimental items from Experiment 1.

1	After the lawyer calmed down(,) the man in the office took some time to rest.
2	After the mother dressed(,) the baby in the living room laughed very happily.
3	After the two journalists met(,) the president in the office smoked some cigarettes.
4	When the two children hugged(,) their friend at the station smiled very happily.
5	After the father washed(,) the boy in the bathroom went to the garden.
6	When the two kids fought(,) their neighbour in the kitchen started to get very irritated.
7	After the man woke up(,) the lady in the bedroom started watching the news.
8	After Mary dressed(,) the boy in the house started cleaning the room.
9	While the pianist calmed(,) down the singer in the hall prepared for the concert.
10	While the two soldiers fought(,) the General on the battlefield received some new
	orders.
11	After the lady woke up(,) her friend in the flat started cooking breakfast.
12	While the nurse washed(,) the baby at the hospital seemed to be very sleepy.
13	After the girl calmed down(,) the boy in the classroom started studying for the exam.
14	After the doctor woke up(,) the nurse in the hospital started working very hard.
15	After the aunt dressed(,) the boy in the bedroom looked at the clock.
16	After the researcher woke up(,) the assistant in the lab decided to go back home.
17	While the two men fought(,) the terrorist in the street tried to escape.
18	After the father washed(,) the baby at home went to sleep.
19	After the coach calmed down(,) the basketball player in the gym started thinking
	about the game.
20	When the two friends met(,) the man in the mall ate a hamburger.
21	After Anna dressed the child(,) in the bedroom started watching television.

- 22 After the two footballers fought(,) the coach at the school cleaned up the gym.
- After the mother washed(,) the child at home started to get dressed.
- 24 When the two actresses met(,) the director in the studio went for lunch.

#### Appendix B

Experimental items from Experiment 2.

- 1 Some people had a party at a friend's house at the weekend. After the neighbour visited(,) Ken's dad/mum decided to prepare himself a cold drink. It was very tasty.
- 2 Many people from the local school attended the sports day. While the student watched Tom's brother/sister started to prepare himself for the big race. It ended up being a great success.
- 3 Dinner was finished and it was time to finish some chores. While the parent helped Roger's son/daughter hoped to allow himself some time to relax. It had been a long day.
- 4 Everybody was getting ready for the highs school graduation ceremony. Before the student called Ben's son/daughter started to dress himself in the locker room. Many people were graduating that day.
- 5 The local school held an art contest a couple of weeks ago. While the student sketched Julia's sister/brother tried to enjoy herself during the contest. The winner got a great prize.
- 6 A huge party was taking place close to the university. After the guest visited Sarah's sister/brother started to enjoy herself at the party. It lasted until midnight.
- 7 There was a big argument between a family and a friend. After the friend called Mary's mother/father attempted to calm herself down very quickly. They apologised to each other the next day.

- 8 There was a big problem that needed to be dealt with quickly. After the manager called Lisa's mother/father started to focus herself on the problem. It was quickly solved after that.
- A family and their gym instructor were getting exhausted due to exercise. After the instructor trained David's nephew/niece decided to allow himself time to rest.
   Everybody agreed to change the exercise plan in the end.
- 10 The drawing had already taken a long time and everyone was tired. While the painter sketched Kevin's father/mother hoped to give himself time to relax. Hopefully it wouldn't take much longer.
- 11 There was going to have to be a meeting about the bad behaviour. After the teacher called Paul's father/mother started to prepare himself for the meeting. The school was busy that day.
- 12 Everybody was told to be very quiet during the ceremony. As the child watched George's uncle/aunt tried to entertain himself while keeping quiet. Some famous people were at the event.
- 13 The rich family always travelled with an assistant. While the assistant helped Sarah's mum/dad started to prepare herself for the dinner. They had booked an expensive restaurant.
- 14 There was a big party at a house in the neighbourhood. After the guest visitedJessica's aunt/uncle decided to prepare herself a large cocktail. It tasted really nice.
- 15 There was an art event at a local school on the weekend. While the artist sketched Emily's daughter/brother started to enjoy herself at the event. It was a very successful afternoon.

- 16 There was a large dinner in town for some local celebrities. After the manager called Alice's daughter/brother started to prepare herself for the ceremony. It was going to be great.
- 17 The research assistant started an experiment with a volunteer. While the assistant watched Mark's nephew/niece tried to entertain himself for a few minutes. The experiment was quite boring in the end.
- 18 It was early morning and everyone at the hotel was sleeping. When the staff woke up John's brother/sister decided to prepare himself a strong coffee. It helped the day get off to a good start.
- 19 The children needed some help to get ready for the holiday. While the child asked Robert's dad/mum started to prepare himself for the trip. There was a lot to get ready.
- 20 Some friends were having a lunch party at the weekend. After the neighbour visited Bob's uncle/aunt started to introduce himself to the guests. A variety of food was served at the party.
- 21 Some friends were having some fun drawing pictures. While the child sketched Rose's mum/dad decided to prepare herself a small snack. They all went to the playground afterwards.
- 22 The parents helped the kids clean after they all got very muddy. As the adult washed Elena's niece/nephew wanted to warm herself with a hot drink. After taking a bath, it was time for bed.
- 23 It was a really busy day at the large company. Before the staff called Diana's aunt/uncle started to prepare herself for some work. Everyone got really tired that day.
- 24 Many of the pupils competed in the annual sports day. After the child watched Anna's niece/nephew began to prepare herself for a race. Everyone was exhausted by the end of the day.

## Appendix C

Experimental items from Experiment 3.

1	After the lady woke up(,) the child in the room ate a sandwich.
2	After the woman dressed(,) the boy in the living room read a book.
3	After the bear scratched(,) the lion in the forest climbed the tree.
4	After the parents hugged(,) the child in the park sat on the bench.
5	After the lady washed(,) the boy in the house cleaned the plate.
6	After the parents kissed(,) the child in the kitchen ate some chocolate.
7	After the mouse scratched(,) the researcher in the university drank some water.
8	After Emily dressed(,) the boy in the house watched the television.
9	After the lady woke up(,) her husband in the apartment drank some coffee.
10	After the parents kissed(,) their son in the dining room ate some bread.
11	When the two students hugged(,) the teacher at the graduation ceremony cried very
	happily.
12	After the nurse washed(,) the child in the hospital sat on the chair.
12 13	After the nurse washed(,) the child in the hospital sat on the chair. After the two brothers hugged(,) their mother at the station ate some cookies.
13	After the two brothers hugged(,) their mother at the station ate some cookies.
13 14	After the two brothers hugged(,) their mother at the station ate some cookies. After the nurse woke up(,) the patient in the hospital knocked on the door.
13 14 15	After the two brothers hugged(,) their mother at the station ate some cookies. After the nurse woke up(,) the patient in the hospital knocked on the door. After the grandmother dressed(,) the child in the bedroom looked at the clock.
13 14 15 16	After the two brothers hugged(,) their mother at the station ate some cookies. After the nurse woke up(,) the patient in the hospital knocked on the door. After the grandmother dressed(,) the child in the bedroom looked at the clock. After the two girls hugged(,) their father at the station drank some lemonade.
13 14 15 16 17	After the two brothers hugged(,) their mother at the station ate some cookies. After the nurse woke up(,) the patient in the hospital knocked on the door. After the grandmother dressed(,) the child in the bedroom looked at the clock. After the two girls hugged(,) their father at the station drank some lemonade. After the cat scratched(,) the girl in the garden sat on the blanket.
13 14 15 16 17 18	After the two brothers hugged(,) their mother at the station ate some cookies. After the nurse woke up(,) the patient in the hospital knocked on the door. After the grandmother dressed(,) the child in the bedroom looked at the clock. After the two girls hugged(,) their father at the station drank some lemonade. After the cat scratched(,) the girl in the garden sat on the blanket. After the grandmother washed(,) the boy at home listened to some music.
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> </ol>	After the two brothers hugged(,) their mother at the station ate some cookies. After the nurse woke up(,) the patient in the hospital knocked on the door. After the grandmother dressed(,) the child in the bedroom looked at the clock. After the two girls hugged(,) their father at the station drank some lemonade. After the cat scratched(,) the girl in the garden sat on the blanket. After the grandmother washed(,) the boy at home listened to some music. After the lady woke up(,) her boyfriend in the flat drank a cup of tea.
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> </ol>	After the two brothers hugged(,) their mother at the station ate some cookies. After the nurse woke up(,) the patient in the hospital knocked on the door. After the grandmother dressed(,) the child in the bedroom looked at the clock. After the two girls hugged(,) their father at the station drank some lemonade. After the cat scratched(,) the girl in the garden sat on the blanket. After the grandmother washed(,) the boy at home listened to some music. After the lady woke up(,) her boyfriend in the flat drank a cup of tea. After the parents kissed(,) their child in the bedroom ate some biscuits.

- After the mother washed(,) the child in the house watched the television.
- After the parents kissed(,) their daughter in the hospital sat down on the sofa.

#### **Appendix D**

Experimental items from Experiment 4.

- 1 When the husband woke up(,) his wife in the bedroom looked at the time. It seemed that the husband was waking himself/his wife up to prepare for a trip. It was going to be fun.
- 2 When the mother dressed(,) her son at home called the dog. It was clear that the mother was dressing herself/her son formally for an important ceremony. It was tiring.
- 3 When the lawyer calmed down(,) the lady in the office looked very tired. It seemed that the lawyer was calming himself/the lady down after having a long talk. It was very serious.
- 4 When the boy hid(,) the toy in the room fell to the floor. It seemed that the boy was hiding himself/the toy while playing a fun game. It was all very silly.
- 5 When Jonathan washed(,) the dog in the garden looked very sleepy. It was clear that Jonathan was washing himself/the dog very quickly with some soap. It was quite tiring.
- 6 When the two men fought(,) the criminal in the city looked very nervous. It seemed that the two men were fighting each other/the criminal for a very long time. It was extremely noisy.
- 7 When the king calmed down(,) the queen in the castle looked out the window. It appeared that the king was calming himself/the queen down after hearing an explosion. It was rather scary.

- 8 While Rebecca dressed(,) the boy in the room wanted to have breakfast. It appeared that Rebecca was dressing herself/the boy after cleaning the kitchen. It was a busy day.
- 9 When Mary woke up(,) her grandson in the bedroom looked very hungry. It seemed that Mary was waking herself/her grandson up on the bed very quickly. It was only 6:00am.
- 10 While the two waiters fought(,) the guest in the bar became very annoyed. It looked like the two waiters were fighting each other/the guest loudly for no reason. It was very annoying.
- 11 When the captain hid(,) the weapon in the ship dropped from the shelf. It seemed that the captain was hiding himself/the weapon in a small back room. It had been a tough day.
- 12 While Lisa washed(,) the patient at the care home looked a little sleepy. It seemed that Lisa was washing herself/the patient before preparing for dinner. It was a very busy day.
- 13 When the manager calmed down(,) the singer in the studio looked a bit nervous. It appeared that the manager was calming himself/the singer down quietly behind the stage. It had been a hard day.
- 14 While the maid woke up(,) the man at the hotel wanted some tea. It seemed that the maid was waking herself/the man up much earlier than expected. It was only :am.
- 15 While the babysitter dressed(,) the baby in the room looked quite happy. It seemed that the babysitter was dressing herself/the baby after cooking the lunch. There was still a lot to do.

- 16 When the student hid(,) the textbook in the classroom fell from the desk. It seemed that the student was hiding himself/the textbook after the class finished. It was lots of fun.
- 17 When some citizens fought(,) the politician in the street became very irritated. It seemed that the citizens were fighting each other/the politician angrily for no apparent reason. The police intervened.
- 18 While the farmer washed(,) the horse in the backyard seemed to be sleepy. It looked like the farmer was washing himself/the horse with some very cold water. It was a sunny day.
- 19 When the flight attendant woke up(,) the pilot in the airport prepared for the flight. It was clear that the flight attendant was waking herself/the pilot up early in the morning. It would be a long flight.
- 20 While the director calmed down(,) the newscaster in the studio tried to relax. It appeared that the director was calming himself/the newscaster down while checking the news. There was lots to do.
- 21 When the nurse dressed(,) the boy in the hospital room wanted to sleep. It appeared that the nurse was dressing herself/the boy very quickly and casually. There was work to be done.
- 22 When the two customers fought(,) the assistant in the shop looked rather upset. It appeared that the two customers were fighting each other/the assistant in front of the till. It was very loud.
- 23 While Jessica washed(,) the cat in the back garden yawned very sleepily. It looked like Jessica was washing herself/the cat after working very hard. It had been a long day.

24 When the parents hugged(,) the baby in the room smiled very happily. It seemed that the parents were hugging each other after/the baby watching a movie. It was very good.

# **Online Supplement 2:**

# **Inferential Statistics for Experiments 2 and 4**

	Disambiguating and Spillover Region			Reflexive and 2 <sup>nd</sup> Spillover Region			
	Estimate	t	р	Estimate	t	р	
	(SE)	value	value	(SE)	value	value	
First pass time	0.05 (0.00)	0.00	0.05	0.04 (0.04)	0.07	= 0	
Ambiguity	0.05 (0.02)	3.08	.005	0.01 (0.01)	0.67	.50	
Group	0.23 (0.04)	5.55	< .001	0.29 (0.05)	6.26	< .001	
Gender	0.02 (0.01)	1.76	.078	0.05 (0.01)	3.67	< .001	
Region	0.02 (0.03)	0.83	.413	0.62 (0.04)	14.40	< .001	
Ambiguity:Group	0.01 (0.03)	0.20	.840	0.06 (0.03)	2.10	.05	
Ambiguity:Gender	0.04 (0.03)	1.19	.239	0.01 (0.03)	0.29	.77	
Group:Gender	0.02 (0.03)	0.85	.404	0.03 (0.03)	1.00	.33	
Ambiguity:Region	0.09 (0.03)	2.92	.005	0.01 (0.03)	0.33	.75	
Group:Region	0.10 (0.03)	3.73	< .001	0.23 (0.05)	4.36	< .001	
Gender:Region	0.01 (0.03)	0.42	.678	0.02 (0.03)	0.84	.41	
Ambiguity:Group:Gender	0.05 (0.07)	0.72	.478	0.03 (0.06)	0.43	.67	
Ambiguity:Group:Region	0.07 (0.06)	1.05	.305	0.07 (0.06)	1.21	.24	
Ambiguity:Gender:Region	0.10 (0.05)	1.93	.054	0.03 (0.05)	0.58	.56	
Group:Gender:Region	0.05 (0.05)	0.89	.374	0.04 (0.06)	0.70	.49	
Ambiguity:Group:Gender:Region	0.06 (0.10)	0.59	.563	0.04 (0.14)	0.31	.76	
Regression path duration							
Ambiguity	0.28 (0.03)	9.03	< .001	0.03 (0.03)	1.12	.274	
Group	0.21 (0.06)	3.57	< .001	0.29 (0.06)	4.86	< .001	
Gender	0.04 (0.02)	2.10	.036	0.18 (0.03)	6.81	< .001	
Region	0.06 (0.04)	1.54	.134	0.95 (0.05)	19.23	< .001	
Ambiguity:Group	0.08 (0.06)	1.30	.201	0.01 (0.06)	0.15	.881	
Ambiguity:Gender	0.09 (0.04)	2.08	.037	0.09 (0.05)	1.87	.076	
Group:Gender	0.03 (0.04)	0.61	.541	0.03 (0.05)	0.74	.464	
Ambiguity:Region	0.10 (0.06)	1.75	.093	0.08 (0.06)	1.50	.147	
Group:Region	0.08 (0.05)	1.43	.157	0.31 (0.08)	3.92	< .001	
Gender:Region	0.01 (0.04)	0.26	.794	0.11 (0.04)	2.46	.014	
Ambiguity:Group:Gender	0.11 (0.08)	1.28	.199	0.14 (0.09)	1.55	.122	
Ambiguity:Group:Region	0.13 (0.10)	1.32	.191	0.13 (0.09)	1.40	.167	
Ambiguity:Render:Region	0.10 (0.09)	1.15	.250	0.06 (0.09)	0.63	.533	
Group:gender:Region	0.03 (0.09)	0.32	.749	0.02 (0.09)	0.28	.780	
Ambiguity:Group:Gender:Region	0.07 (0.18)	0.40	.693	0.16 (0.17)	0.93	.354	
Total viewing time							
Ambiguity	0.24 (0.02)	10.2	< .001	0.01 (0.02)	0.52	.606	
Group	0.32 (0.07)	4.74	< .001	0.43 (0.07)	6.40	< .001	
Gender	0.14 (0.04)	3.58	.002	0.21 (0.02)	8.96	< .001	
Region	0.04 (0.04)	1.05	.303	0.60 (0.04)	13.82	< .001	
Ambiguity:Group	0.06 (0.04)	1.45	.146	0.07 (0.05)	1.39	.177	
Ambiguity:Gender	0.05 (0.05)	1.14	.268	0.04 (0.04)	1.08	.279	
Group:Gender	0.02 (0.05)	0.41	.685	0.02 (0.05)	0.41	.687	
Ambiguity:Region	0.08 (0.03)	2.90	.004	0.00 (0.03)	0.09	.933	
Group:Region	0.11 (0.04)	3.02	.003	0.23 (0.05)	4.54	< .001	
Gender:Region	0.03 (0.03)	0.87	.396	0.07 (0.03)	2.49	.021	
Ambiguity:Group:Gender	0.08 (0.09)	0.89	.377	0.06 (0.08)	0.75	.452	
Ambiguity:Group:Region	0.01 (0.06)	0.10	.922	0.06 (0.06)	1.00	.319	
Ambiguity:Gender:Region	0.11 (0.06)	1.95	.051	0.01 (0.06)	0.26	.797	
Group:gender:Region	0.02 (0.06)	0.31	.759	0.02 (0.05)	0.36	.723	
Ambiguity:Group:Gender:Region	0.04 (0.11)	0.37	.711	0.10 (0.11)	0.94	.360	

## Online Supplement Table A. Summary of statistical analyses for Experiment 2.

## Online Supplement Table B. Summary of statistical analyses for Experiment 4.

	Disambiguating and Spillover Region			Critical and 2 <sup>nd</sup> Spillover Region			
	Estimate (SE)	t value	р value	Estimate (SE)	t value	р	
First pass time	(32)	value	value	(3E)	value	value	
Ambiguity	0.04 (0.02)	2.51	.022	0.01 (0.02)	0.54	.598	
Group	0.16 (0.04)	4.06	< .001	0.21 (0.05)	4.27	< .000	
Consistency	0.02 (0.02)	1.24	.221	0.10 (0.02)	4.86	< .001	
Region	0.38 (0.05)	7.79	< .001	0.36 (0.06)	6.23	< .001	
Ambiguity:Group	0.02 (0.03)	0.59	.554	0.04 (0.03)	1.12	.268	
Ambiguity:Consistency	0.02 (0.03)	0.61	.549	0.01 (0.03)	0.20	.842	
Group:Consistency	0.03 (0.03)	0.81	.420	0.00 (0.04)	0.11	.910	
Ambiguity:Region	0.17 (0.04)	4.35	< .001	0.06 (0.03)	1.96	.063	
Group:Region	0.28 (0.06)	4.75	< .001	0.05 (0.04)	1.07	.292	
Consistency:Region	0.00 (0.03)	0.05	.957	0.22 (0.05)	4.87	< .001	
Ambiguity:Group:Consistency	0.04 (0.06)	0.62	.534	0.07 (0.07)	0.97	.343	
Ambiguity:Group:Region	0.03 (0.06)	0.44	.666	0.07 (0.07)	1.01	.324	
Ambiguity:Consistency:Region	0.01 (0.06)	0.11	.910	0.03 (0.05)	0.64	.524	
Group:Consistency:Region	0.00 (0.07)	0.05	.964	0.12 (0.06)	1.87	.074	
Ambiguity:Group:Consistency:Region	0.12 (0.12)	0.96	.336	0.04 (0.11)	0.32	.750	
Regression path duration	0.12 (0.12)	0.50	.000	0.04 (0.11)	0.02	.750	
Ambiguity	0.34 (0.03)	9.83	< .001	0.04 (0.02)	2.18	.042	
Group	0.02 (0.06)	0.31	.758	0.18 (0.05)	3.37	.001	
Consistency	0.01 (0.02)	0.30	.767	0.14 (0.03)	4.93	< .001	
Region	0.98 (0.06)	15.78	< .001	0.46 (0.05)	9.06	< .001	
Ambiguity:Group	0.15 (0.05)	2.79	.010	0.03 (0.04)	0.63	.535	
Ambiguity:Consistency	0.03 (0.05)	0.56	.573	0.09 (0.04)	2.49	.015	
Group:Consistency	0.01 (0.05)	0.19	.849	0.06 (0.04)	1.45	.150	
Ambiguity:Region	0.27 (0.05)	5.07	< .001	0.06 (0.04)	1.28	.204	
Group:Region	0.24 (0.09)	2.55	.013	0.00 (0.05)	0.07	.945	
Consistency:Region	0.06 (0.06)	1.08	.293	0.14 (0.06)	2.49	.021	
Ambiguity:Group:Consistency	0.05 (0.09)	0.54	.593	0.01 (0.07)	0.08	.934	
Ambiguity:Group:Region	0.01 (0.13)	0.05	.964	0.01 (0.09)	0.05	.958	
Ambiguity:Consistency:Region	0.08 (0.10)	0.79	.427	0.10 (0.07)	1.35	.177	
Group:Consistency:Region	0.01 (0.12)	0.10	.916	0.04 (0.07)	0.49	.624	
Ambiguity:Group:Consistency:Region	0.29 (0.21)	1.40	.178	0.07 (0.14)	0.48	.637	
Total viewing time	0.20 (0.21)	1.40	.170	0.07 (0.14)	0.40	.007	
Ambiguity	0.19 (0.03)	6.18	< .001	0.08 (0.02)	3.76	.001	
Group	0.29 (0.07)	4.29	< .001	0.31 (0.06)	4.94	< .001	
Consistency	0.05 (0.03)	1.68	.108	0.21 (0.04)	6.02	< .001	
Region	0.39 (0.06)	7.02	< .001	0.49 (0.07)	7.48	< .001	
Ambiguity:Group	0.01 (0.06)	0.16	.874	0.02 (0.05)	0.36	.722	
Ambiguity:Consistency	0.03 (0.05)	0.05	.958	0.08 (0.05)	1.53	.141	
Group:Consistency	0.00 (0.04)	0.05	.958	0.01 (0.06)	0.20	.844	
Ambiguity:Region	0.25 (0.03)	0.05 7.45	< .001	0.08 (0.03)	2.46	.022	
Group:Region	0.27 (0.06)	4.77	< .001	0.02 (0.04)	0.52	.607	
Consistency:Region	0.02 (0.04)	0.42	.680	0.22 (0.04)	5.36	< .007	
Ambiguity:Group:Consistency	0.02 (0.04)	0.42	.592	0.06 (0.04)	0.79	.430	
Ambiguity:Group:Region	0.03 (0.08)	2.04	.042	0.05 (0.06)	0.79	.453	
Ambiguity:Consistency:Region	0.10 (0.06)	1.56	.132	0.01 (0.06)	0.23	.433	
Group:Consistency:Region	0.03 (0.07)	0.38	.705	0.09 (0.06)	1.55	.136	
Ambiguity:Group:Consistency:Region	0.07 (0.13)	0.38	.559	0.09 (0.00)	0.80	.425	