

Supplementary Materials to

Metaphor and Gender: Are Words Associated with Source Domains Perceived in a Gendered Way?

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Appendix A: Order of stimuli presentation after randomization

Order	Stimuli items
1	<i>building</i>
2	<i>warrior</i>
3	<i>seed</i>
4	<i>root</i>
5	<i>direction</i>
6	<i>boy</i>
7	<i>sport</i>
8	<i>framework</i>
9	<i>game</i>
10	<i>blossom</i>
11	<i>championship</i>
12	<i>combat</i>
13	<i>plant</i>
14	<i>road</i>
15	<i>competition</i>
16	<i>path</i>
17	<i>girl</i>
18	<i>architecture</i>
19	<i>enemy</i>
20	<i>medalist</i>
21	<i>race</i>
22	<i>construction</i>
23	<i>destination</i>
24	<i>battle</i>
25	<i>team</i>
26	<i>foundation</i>
27	<i>cultivate</i>
28	<i>man</i>
29	<i>progress</i>
30	<i>military</i>
31	<i>buttress</i>
32	<i>fruit</i>
33	<i>route</i>
34	<i>support</i>
35	<i>war</i>
36	<i>sprout</i>
37	<i>journey</i>
38	<i>rivalry</i>
39	<i>woman</i>


40	<i>contest</i>
41	<i>roof</i>
42	<i>army</i>
43	<i>fertilize</i>
44	<i>assault</i>
45	<i>wall</i>
46	<i>trip</i>
47	<i>weapon</i>
48	<i>reap</i>
49	<i>tournament</i>
50	<i>lady</i>
51	<i>structure</i>
52	<i>skirmish</i>
53	<i>travel</i>
54	<i>harvest</i>
55	<i>way</i>

Appendix B: Screenshots of the sample survey scales in Studies 1 to 3

Strength of Association with Masculinity

warrior

Weakly Associated 1 2 3 4 5 6 7 Strongly Associated I do not know the word 8




Screenshot of Survey 1

Strength of Association with Femininity

warrior

Weakly Associated 1 2 3 4 5 6 7 Strongly Associated I do not know the word 8




Screenshot of Survey 2

Strength of Association with Masculinity or Femininity

warrior

Strongly Associated with Masculinity 1 2 3 4 5 6 7 Strongly Associated with Femininity I do not know the word 8



Screenshot of Survey 3

Appendix C: Numbers of participants split by de/selection criteria

In Survey 1, 538 participants were recruited. We then selected them based on the following criteria:

- Participants who completed the entire questionnaire, 507 remained.
- Participants who reported a US nationality, 507 remained.
- Participants who identified as either male or female, 506 remained.

Then, out of the 506 participants, we further selected according to the following criteria:

- (a) Excluded participants who had missing values on at least one of the attention check items (man, boy, girl, lady, woman), indicating that they did not know these (standard) English words, 489 remained.
- (b) Excluded participants who had an $SD < 1$ on the five attention check items combined (man, boy, girl, lady, woman), indicating that they did not differentiate between explicitly male and female labels, 253 remained.
- (c) Excluded those who scored the mean of the masculine words (man, boy) lower on masculinity than the mean of the feminine words (lady, girl, woman), 228 remained.

Therefore, Survey 1 had a total of 228 participants who met all the inclusion criteria.

In Survey 2, 537 participants were recruited. We then selected them based on the following criteria:

- Participants who completed the entire questionnaire, 501 remained.
- Participants who reported a US nationality, 500 remained.
- Participants who identified as either male or female, 500 remained.

Then, out of the 500 participants, we further selected according to the following criteria:

- (a) Excluded participants who had missing values on at least one of the attention check items (man, boy, girl, lady, woman), indicating that they did not know these (standard) English words, 482 remained.
- (b) Excluded participants who had an $SD < 1$ on the five attention check items combined (man, boy, girl, lady, woman), indicating that they did not differentiate between explicitly male and female labels, 378 remained.
- (c) Excluded those who scored the mean of the masculine words (man, boy) lower on masculinity than the mean of the feminine words (lady, girl, woman), 354 remained.

Therefore, Survey 2 had a total of 354 participants who met all the inclusion criteria.

In Survey 3, 593 participants were recruited. We then selected them based on the following criteria:

- Participants who completed the entire questionnaire, 546 remained.
- Participants who reported a US nationality, 544 remained.
- Participants who identified as either male or female, 541 remained.

Then, out of the 541 participants, we further selected according to the following criteria:

(a) Excluded participants who had missing values on at least one of the attention check items (man, boy, girl, lady, woman), indicating that they did not know these (standard) English words, 533 remained.

(b) Excluded participants who had an $SD < 1$ on the five attention check items combined (man, boy, girl, lady, woman), indicating that they did not differentiate between explicitly male and female labels, 490 remained.

(c) Excluded those who scored the mean of the masculine words (man, boy) lower on masculinity than the mean of the feminine words (lady, girl, woman), 478 remained.

Therefore, Survey 3 had a total of 478 participants who met all the inclusion criteria.

Appendix D: Power analysis results

Study 1

```
> powerSim(masculinity.model3, fcompare(~ source_domain + gender, "lr"), nsim=1000)
Power for model comparison, (95% confidence interval):=====|
100.0% (99.63, 100.0)

Test: Likelihood ratio
      Comparison to ~source_domain + gender + [re]

Based on 1000 simulations, (5 warnings, 0 errors)
alpha = 0.05, nrow = 11263

Time elapsed: 0 h 10 m 19 s

nb: result might be an observed power calculation
Warning message:
In observedPowerWarning(sim) :
  This appears to be an "observed power" calculation
```

Study 2

```
> powerSim(Femininity.model3, fcompare(~ source_domain + gender, "lr"), nsim=1000)
Power for model comparison, (95% confidence interval):=====|
91.70% (89.81, 93.34)

Test: Likelihood ratio
      Comparison to ~source_domain + gender + [re]

Based on 1000 simulations, (12 warnings, 0 errors)
alpha = 0.05, nrow = 17523

Time elapsed: 0 h 16 m 43 s

nb: result might be an observed power calculation
Warning message:
In observedPowerWarning(sim) :
  This appears to be an "observed power" calculation
> |
```

Study 3

```
> powerSim(MasculinityorFemininity.model3, fcompare(~ source_domain + gender, "lr"), nsim=1000)
Power for model comparison, (95% confidence interval):=====|
99.50% (98.84, 99.84)

Test: Likelihood ratio
      Comparison to ~source_domain + gender + [re]

Based on 1000 simulations, (28 warnings, 0 errors)
alpha = 0.05, nrow = 22681

Time elapsed: 0 h 18 m 20 s

nb: result might be an observed power calculation
Warning message:
In observedPowerWarning(sim) :
  This appears to be an "observed power" calculation
> |
```

Appendix E: t-tests for source domains in Studies 1-3

t-test for Study 1

Source domain: WAR

```
>
> #T-test
> SD_WAR_Study_1 = Survey_1 %>% filter(source_domain=="War")
> Mean_WAR = SD_WAR_Study_1$masculinity
> t.test_WAR_Study1 = t.test(Mean_WAR, mu=4)
> t.test_WAR_Study1
```

One Sample t-test

```
data: Mean_WAR
t = 42.601, df = 2243, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
 5.472614 5.614730
sample estimates:
mean of x
 5.543672
```

Source domain: PLANT

```
>
> #T-test
> SD_PLANT_Study_1 = Survey_1 %>% filter(source_domain=="Plant")
> Mean_PLANT = SD_PLANT_Study_1$masculinity
> t.test_PLANT_Study1 = t.test(Mean_PLANT, mu=4)
> t.test_PLANT_Study1
```

One Sample t-test

```
data: Mean_PLANT
t = -18.649, df = 2252, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
 3.172482 3.329959
sample estimates:
mean of x
 3.251221
```

Source domain: JOURNEY

```
> #T-test
> SD_JOURNEY_Study_1 = Survey_1 %>% filter(source_domain=="Journey")
> Mean_JOURNEY = SD_JOURNEY_Study_1$masculinity
> t.test_JOURNEY_Study1 = t.test(Mean_JOURNEY, mu=4)
> t.test_JOURNEY_Study1
```

One Sample t-test

data: Mean_JOURNEY
t = -10.731, df = 2261, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
3.487059 3.645567
sample estimates:
mean of x
3.566313

Source domain: COMPETITION

```
>  
> #T-test  
> SD_COMPETITION_Study_1 = Survey_1 %>% filter(source_domain=="Competition")  
> Mean_COMPETITION = SD_COMPETITION_Study_1$masculinity  
> t.test_COMPETITION_Study1 = t.test(Mean_COMPETITION, mu=4)  
> t.test_COMPETITION_Study1
```

One Sample t-test

data: Mean_COMPETITION
t = 24.226, df = 2266, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
4.829055 4.975092
sample estimates:
mean of x
4.902073

Source domain: BUILDING

```
>  
> #T-test  
> SD_BUILDING_Study_1 = Survey_1 %>% filter(source_domain=="Building")  
> Mean_BUILDING = SD_BUILDING_Study_1$masculinity  
> t.test_BUILDING_Study1 = t.test(Mean_BUILDING, mu=4)  
> t.test_BUILDING_Study1
```

One Sample t-test

data: Mean_BUILDING
t = 3.6765, df = 2236, p-value = 0.000242
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
4.073422 4.241285
sample estimates:
mean of x
4.157354

t-test for Study 2

Source domain: WAR

```
> #T-test
> SD_WAR_Study_2 = Survey_2 %>% filter(source_domain=="War")
> Mean_WAR = SD_WAR_Study_2$Femininity
> t.test_WAR_Study2 = t.test(Mean_WAR, mu=4)
> t.test_WAR_Study2
```

One Sample t-test

```
data: Mean_WAR
t = -52.947, df = 3501, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
 2.384045 2.499451
sample estimates:
mean of x
 2.441748
```

Source domain: PLANT

```
> #T-test
> SD_PLANT_Study_2 = Survey_2 %>% filter(source_domain=="Plant")
> Mean_PLANT = SD_PLANT_Study_2$Femininity
> t.test_PLANT_Study2 = t.test(Mean_PLANT, mu=4)
> t.test_PLANT_Study2
```

One Sample t-test

```
data: Mean_PLANT
t = 17.237, df = 3509, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
 4.486810 4.611766
sample estimates:
mean of x
 4.549288
```

Source domain: JOURNEY

```
>
> #T-test
> SD_JOURNEY_Study_2 = Survey_2 %>% filter(source_domain=="Journey")
> Mean_JOURNEY = SD_JOURNEY_Study_2$Femininity
> t.test_JOURNEY_Study2 = t.test(Mean_JOURNEY, mu=4)
> t.test_JOURNEY_Study2
```

One Sample t-test

data: Mean_JOURNEY
t = -15.353, df = 3531, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
3.477653 3.595960
sample estimates:
mean of x
3.536806

Source domain: COMPETITION

```
> #T-test  
> SD_COMPETITION_Study_2 = Survey_2 %>% filter(source_domain=="Competition")  
> Mean_COMPETITION = SD_COMPETITION_Study_2$Femininity  
> t.test_COMPETITION_Study2 = t.test(Mean_COMPETITION, mu=4)  
> t.test_COMPETITION_Study2
```

One Sample t-test

data: Mean_COMPETITION
t = -18.467, df = 3526, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
3.372114 3.492644
sample estimates:
mean of x
3.432379

Source domain: BUILDING

```
>  
> #T-test  
> SD_BUILDING_Study_2 = Survey_2 %>% filter(source_domain=="Building")  
> Mean_BUILDING = SD_BUILDING_Study_2$Femininity  
> t.test_BUILDING_Study2 = t.test(Mean_BUILDING, mu=4)  
> t.test_BUILDING_Study2
```

One Sample t-test

data: Mean_BUILDING
t = -19.776, df = 3451, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
3.268937 3.400819
sample estimates:
mean of x
3.334878

t-test for Study 3

Source domain: WAR

```
> #T-test  
> SD_WAR_Study_3 = Survey_3 %>% filter(source_domain=="War")  
> Mean_WAR = SD_WAR_Study_3$MasculinityorFemininity  
> t.test_WAR_Study3 = t.test(Mean_WAR, mu=4)  
> t.test_WAR_Study3
```

One Sample t-test

```
data: Mean_WAR  
t = -79.963, df = 4698, p-value < 2.2e-16  
alternative hypothesis: true mean is not equal to 4  
95 percent confidence interval:  
2.326411 2.406511  
sample estimates:  
mean of x  
2.366461
```

Source domain: PLANT

```
>  
> #T-test  
> SD_PLANT_Study_3 = Survey_3 %>% filter(source_domain=="Plant")  
> Mean_PLANT = SD_PLANT_Study_3$MasculinityorFemininity  
> t.test_PLANT_Study3 = t.test(Mean_PLANT, mu=4)  
> t.test_PLANT_Study3
```

One Sample t-test

```
data: Mean_PLANT  
t = 38.388, df = 4467, p-value < 2.2e-16  
alternative hypothesis: true mean is not equal to 4  
95 percent confidence interval:  
4.785819 4.870403  
sample estimates:  
mean of x  
4.828111
```

Source domain: JOURNEY

```
>  
> #T-test  
> SD_JOURNEY_Study_3 = Survey_3 %>% filter(source_domain=="Journey")  
> Mean_JOURNEY = SD_JOURNEY_Study_3$MasculinityorFemininity  
> t.test_JOURNEY_Study3 = t.test(Mean_JOURNEY, mu=4)  
> t.test_JOURNEY_Study3
```

One Sample t-test

data: Mean_JOURNEY
t = 8.7992, df = 4686, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
4.108115 4.170102
sample estimates:
mean of x
4.139108

Source domain: COMPETITION

```
>  
> #T-test  
> SD_COMPETITION_Study_3 = Survey_3 %>% filter(source_domain=="Competition")  
> Mean_COMPETITION = SD_COMPETITION_Study_3$MasculinityorFemininity  
> t.test_COMPETITION_Study3 = t.test(Mean_COMPETITION, mu=4)  
> t.test_COMPETITION_Study3
```

One Sample t-test

data: Mean_COMPETITION
t = -28.942, df = 4249, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
3.392268 3.469379
sample estimates:
mean of x
3.430824

Source domain: BUILDING

```
>  
> #T-test  
> SD_BUILDING_Study_3 = Survey_3 %>% filter(source_domain=="Building")  
> Mean_BUILDING = SD_BUILDING_Study_3$MasculinityorFemininity  
> t.test_BUILDING_Study3 = t.test(Mean_BUILDING, mu=4)  
> t.test_BUILDING_Study3
```

One Sample t-test

data: Mean_BUILDING
t = -17.006, df = 4576, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 4
95 percent confidence interval:
3.571869 3.660379
sample estimates:
mean of x
3.616124

Appendix F: Means (and Standard Deviations) of perceived masculinity and perceived femininity across domains (Studies 1-3)

	WAR	BUILDING	COMPETITION	JOURNEY	PLANT
Perceived masculinity (Study 1)					
Men	5.61 (1.63)	4.35 (1.92)	5.03 (1.65)	3.81 (1.83)	3.48 (1.85)
Women	5.43 (1.84)	3.84 (2.15)	4.70 (1.94)	3.16 (2.00)	2.88 (1.93)
Total	5.54 (1.72)	4.16 (2.02)	4.90 (1.77)	3.57 (1.92)	3.25 (1.91)
Perceived femininity (Study 2)					
Men	2.35 (1.70)	3.27 (1.91)	3.31 (1.78)	3.36 (1.71)	4.37 (1.87)
Women	2.53 (1.78)	3.40 (2.03)	3.55 (1.86)	3.70 (1.85)	4.71 (1.89)
Total	2.44 (1.74)	3.33 (1.98)	3.43 (1.83)	3.54 (1.79)	4.55 (1.89)
Masculinity-Femininity (Study 3)					
Men	2.25 (1.38)	3.65 (1.58)	3.36 (1.30)	3.99 (1.14)	4.86 (1.52)
Women	2.45 (1.41)	3.65 (1.54)	3.50 (1.25)	4.25 (1.04)	4.99 (1.45)
Total	2.37 (1.40)	3.65 (1.56)	3.44 (1.27)	4.15 (1.09)	4.94 (1.48)

Note: All variables were measured on a scale from 1 to 7, with 7 indicating that the domain was perceived as more masculine (Study 1) or more feminine (Studies 2-3).

Appendix G (1): Fixed-effects estimates and variance–covariance estimates for the models predicting perceived masculinity (SD = Source domain; Est. = Estimates) – Study 1

<i>Predictors</i>	masculinity			<i>Est.</i>	masculinity			<i>Est.</i>	masculinity			<i>Est.</i>	masculinity		
	<i>Est.</i>	<i>99%CI</i>	<i>p</i>		<i>Est.</i>	<i>99%CI</i>	<i>p</i>		<i>Est.</i>	<i>99%CI</i>	<i>p</i>		<i>Est.</i>	<i>99%CI</i>	<i>p</i>
(Intercept)	4.28	3.87 – 4.70	<0.001	5.53	5.04 – 6.01	<0.001	5.25	4.70 – 5.79	<0.001	5.41	4.86 – 5.96	<0.001	5.4	4.88 – 5.93	<0.001
SD [Competition]				-0.63	-1.26 – 0.00	0.01	-0.63	-1.26 – 0.00	0.01	-0.71	-1.36 – -0.07	0.004	-0.71	-1.39 – -0.03	0.007
SD [Building]				-1.37	-2.00 – -0.74	<0.001	-1.37	-2.00 – -0.74	<0.001	-1.57	-2.22 – -0.93	<0.001	-1.57	-2.28 – -0.86	<0.001
SD [Journey]				-1.96	-2.59 – -1.33	<0.001	-1.96	-2.59 – -1.33	<0.001	-2.24	-2.89 – -1.60	<0.001	-2.24	-2.98 – -1.49	<0.001
SD [Plant]				-2.27	-2.90 – -1.64	<0.001	-2.27	-2.90 – -1.64	<0.001	-2.52	-3.16 – -1.88	<0.001	-2.51	-3.26 – -1.77	<0.001
gender [Male]							0.46	0.06 – 0.86	0.003	0.19	-0.23 – 0.61	0.238	0.19	-0.17 – 0.55	0.165
SD [Competition] * gender [Male]										0.14	-0.08 – 0.36	0.092	0.14	-0.19 – 0.48	0.281
SD [Building] * gender [Male]										0.32	0.10 – 0.54	<0.001	0.32	-0.10 – 0.75	0.052
SD [Journey] * gender [Male]										0.46	0.24 – 0.68	<0.001	0.46	-0.06 – 0.98	0.022
SD [Plant] * gender [Male]										0.40	0.18 – 0.62	<0.001	0.40	-0.12 – 0.92	0.046
Random Effects															
σ^2	1.92			1.92			1.92			1.91			1.53		
τ_{00}	1.30	Participant		1.30	Participant		1.25	Participant		1.25	Participant		0.90	Participant	
	0.99	Target Word		0.29	Target Word		0.29	Target Word		0.29	Target Word		0.30	Target Word	
τ_{11}													0.60	Competition	
													1.16	Building	
													1.88	Journey	
													1.89	Plant	
ρ_{01}													0.02	Competition	
													-0.13	Building	
													-0.21	Journey	
													-0.42	Plant	
ICC	0.54			0.45			0.44			0.45			0.56		
N	228	Participant		228	Participant		228	Participant		228	Participant		228	Participant	
	50	Target Word		50	Target Word		50	Target Word		50	Target Word		50	Target Word	
Observations	11263			11263			11263			11263			11263		
Marginal R ² / Conditional R ²	0.000 / 0.544			0.167 / 0.544			0.178 / 0.544			0.180 / 0.545			0.179 / 0.637		

Appendix G (2): Fixed-effects estimates and variance–covariance estimates for the models predicting perceived masculinity (SD = Source domain; Est. = Estimates) – Study 2

<i>Predictors</i>	Femininity			Femininity			Femininity			Femininity			Femininity		
	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>
(Intercept)	3.46	3.10 – 3.82	<0.001	2.45	1.93 – 2.97	<0.001	2.56	2.02 – 3.10	<0.001	2.53	1.99 – 3.07	<0.001	2.53	1.98 – 3.09	<0.001
SD [Competition]				0.98	0.28 – 1.69	<0.001	0.98	0.28 – 1.69	<0.001	1.02	0.31 – 1.73	<0.001	1.01	0.29 – 1.73	<0.001
SD [Building]				0.88	0.18 – 1.59	0.001	0.88	0.18 – 1.59	0.001	0.87	0.16 – 1.57	0.002	0.86	0.14 – 1.59	0.002
SD [Journey]				1.09	0.39 – 1.79	<0.001	1.09	0.39 – 1.79	<0.001	1.17	0.46 – 1.88	<0.001	1.16	0.43 – 1.90	<0.001
SD [Plant]				2.1	1.40 – 2.81	<0.001	2.1	1.40 – 2.81	<0.001	2.18	1.47 – 2.89	<0.001	2.17	1.42 – 2.93	<0.001
gender [Male]							-0.24	-0.54 – 0.06	0.042	-0.17	-0.49 – 0.15	0.179	-0.17	-0.52 – 0.19	0.225
SD [Competition] * gender [Male]										-0.07	-0.24 – 0.10	0.297	-0.07	-0.31 – 0.17	0.453
SD [Building] * gender [Male]										0.04	-0.13 – 0.21	0.566	0.04	-0.22 – 0.30	0.716
SD [Journey] * gender [Male]										-0.16	-0.33 – 0.00	0.012	-0.16	-0.47 – 0.14	0.164
SD [Plant] * gender [Male]										-0.16	-0.33 – 0.01	0.013	-0.16	-0.57 – 0.24	0.304
Random Effects															
σ^2	1.86			1.86			1.86			1.86			1.52		
τ_{00}	1.19 Participant			1.19 Participant			1.17 Participant			1.17 Participant			1.49 Participant		
	0.82 Target Word			0.37 Target Word			0.37 Target Word			0.37 Target Word			0.37 Target Word		
τ_{11}													0.44 Competition		
													0.59 Building		
													0.91 Journey		
													1.88 Plant		
ρ_{01}													0.00 Competition		
													-0.43 Building		
													-0.38 Journey		
													-0.62 Plant		
ICC	0.52			0.46			0.45			0.45			0.55		
N	354 Participant			354 Participant			354 Participant			354 Participant			354 Participant		
	50 Target Word			50 Target Word			50 Target Word			50 Target Word			50 Target Word		
Observations	17523			17523			17523			17523			17523		
Marginal R ² / Conditional R ²	0.000 / 0.519			0.116 / 0.519			0.120 / 0.519			0.120 / 0.519			0.119 / 0.605		

Appendix G (3): Fixed-effects estimates and variance–covariance estimates for the models predicting perceived masculinity/femininity (SD = Source domain; Est. = Estimates) – Study 3

<i>Predictors</i>	Masculinity or Femininity			Masculinity or Femininity			Masculinity or Femininity			Masculinity or Femininity			Masculinity or Femininity		
	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>	<i>Est.</i>	<i>99%CI</i>	<i>p</i>
(Intercept)	3.72	3.35 – 4.08	<0.001	2.38	1.95 – 2.81	<0.001	2.44	2.01 – 2.87	<0.001	2.46	2.03 – 2.89	<0.001	2.46	2.01 – 2.90	<0.001
SD [Competition]				1.07	0.47 – 1.66	<0.001	1.07	0.47 – 1.66	<0.001	1.04	0.44 – 1.64	<0.001	1.04	0.43 – 1.64	<0.001
SD [Building]				1.29	0.69 – 1.88	<0.001	1.29	0.69 – 1.88	<0.001	1.21	0.61 – 1.81	<0.001	1.21	0.60 – 1.81	<0.001
SD [Journey]				1.77	1.17 – 2.36	<0.001	1.77	1.17 – 2.36	<0.001	1.79	1.20 – 2.39	<0.001	1.79	1.18 – 2.40	<0.001
SD [Plant]				2.56	1.96 – 3.16	<0.001	2.56	1.96 – 3.16	<0.001	2.53	1.93 – 3.13	<0.001	2.53	1.90 – 3.15	<0.001
gender [Male]							-0.14	-0.27 – -0.01	0.004	-0.19	-0.34 – -0.04	0.001	-0.18	-0.41 – 0.04	0.038
SD [Competition] * gender [Male]										0.06	-0.06 – 0.19	0.211	0.06	-0.12 – 0.23	0.398
SD [Building] * gender [Male]										0.19	0.06 – 0.31	<0.001	0.18	-0.01 – 0.37	0.012
SD [Journey] * gender [Male]										-0.06	-0.19 – 0.06	0.185	-0.07	-0.30 – 0.15	0.395
SD [Plant] * gender [Male]										0.07	-0.06 – 0.19	0.169	0.05	-0.25 – 0.36	0.652
Random Effects															
σ^2	1.37			1.37			1.37			1.37			1.15		
τ_{00}	0.25 Participant			0.25 Participant			0.25 Participant			0.25 Participant			0.79 Participant		
	0.97 Target Word			0.26 Target Word			0.26 Target Word			0.26 Target Word			0.27 Target Word		
τ_{11}													0.30 Competition		
													0.37 Building		
													0.64 Journey		
													1.36 Plant		
ρ_{01}													-0.63 Competition		
													-0.70 Building		
													-0.82 Journey		
													-0.86 Plant		
ICC	0.47			0.27			0.27			0.27			0.39		
N	478 Participant			478 Participant			478 Participant			478 Participant			478 Participant		
	50 Target Word			50 Target Word			50 Target Word			50 Target Word			50 Target Word		
Observations	23457			23457			23457			23457			23457		
Marginal R ² / Conditional R ²	0.000 / 0.473			0.274 / 0.473			0.276 / 0.473			0.276 / 0.474			0.275 / 0.555		

Appendix H: Lists of means of perceived masculinity/femininity (Studies 1-3)

Study 1				
Source domains	Metaphorical keywords	Gender	Means of perceived masculinity by men and women	Overall means of perceived masculinity
Building	architecture	Female	3.76	4.18
		Male	4.44	
	building	Female	5.06	5.25
		Male	5.37	
	buttress	Female	3.20	3.44
		Male	3.58	
	construction	Female	5.15	5.33
		Male	5.45	
	foundation	Female	3.92	4.24
		Male	4.44	
	framework	Female	3.57	3.88
		Male	4.06	
	roof	Female	3.11	3.47
		Male	3.69	
	structure	Female	3.72	4.00
		Male	4.16	
	support	Female	3.70	4.09
		Male	4.33	
	wall	Female	3.09	3.62
		Male	3.94	
Competition	championship	Female	5.28	5.49
		Male	5.62	
	competition	Female	5.06	5.29
		Male	5.43	
	contest	Female	4.28	4.56
		Male	4.73	
	game	Female	4.37	4.68
		Male	4.87	
	medalist	Female	4.20	4.39
		Male	4.51	
	race	Female	4.10	4.56
		Male	4.84	
	rivalry	Female	5.07	4.96
		Male	4.89	
	sport	Female	5.56	5.60

	team	Male	5.62	4.59
		Female	4.35	
		Male	4.74	
	tournament	Female	4.67	4.89
		Male	5.03	
Journey	destination	Female	3.34	3.67
		Male	3.88	
	direction	Female	3.69	4.05
		Male	4.27	
	journey	Female	3.38	3.79
		Male	4.04	
	path	Female	2.94	3.41
		Male	3.69	
	progress	Female	3.73	4.00
		Male	4.16	
	road	Female	3.06	3.36
		Male	3.54	
	route	Female	3.00	3.35
		Male	3.57	
	travel	Female	2.93	3.48
		Male	3.82	
	trip	Female	2.84	3.36
		Male	3.67	
	way	Female	2.72	3.20
		Male	3.49	
Plant	blossom	Female	2.15	2.56
		Male	2.80	
	cultivate	Female	3.05	3.58
		Male	3.91	
	fertilize	Female	3.08	3.33
		Male	3.48	
	fruit	Female	2.14	2.52
		Male	2.76	
	harvest	Female	3.18	3.53
		Male	3.75	
	plant	Female	2.49	2.96
		Male	3.24	
	reap	Female	2.97	3.40
		Male	3.67	
	root	Female	3.45	3.76
		Male	3.95	
	seed	Female	3.54	3.80

		Male	3.96	
	sprout	Female	2.72	3.07
		Male	3.27	
War	army	Female	6.09	6.18
		Male	6.23	
	assault	Female	5.15	5.03
		Male	4.96	
	battle	Female	5.66	5.74
		Male	5.79	
	combat	Female	5.65	5.82
		Male	5.93	
	enemy	Female	3.90	4.13
		Male	4.27	
	military	Female	6.00	6.12
		Male	6.20	
	skirmish	Female	3.73	4.05
		Male	4.24	
	war	Female	6.13	6.22
		Male	6.28	
	warrior	Female	6.33	6.43
		Male	6.50	
	weapon	Female	5.45	5.51
		Male	5.54	

Study 2				
Source domains	Metaphorical keywords	Gender	Means of perceived femininity by men and women	Overall means of perceived femininity
Building	architecture	Female	2.96	3.01
Building	architecture	Male	3.05	
Building	building	Female	2.91	2.89
Building	building	Male	2.86	
Building	buttress	Female	3.17	3.22
Building	buttress	Male	3.26	
Building	construction	Female	2.34	2.31
Building	construction	Male	2.27	
Building	foundation	Female	4.65	4.43
Building	foundation	Male	4.19	
Building	framework	Female	3.49	3.43
Building	framework	Male	3.36	
Building	roof	Female	2.40	2.45
Building	roof	Male	2.50	
Building	structure	Female	3.77	3.57
Building	structure	Male	3.34	
Building	support	Female	5.86	5.54
Building	support	Male	5.19	
Building	wall	Female	2.36	2.49
Building	wall	Male	2.63	
Competition	championship	Female	3.76	3.52
Competition	championship	Male	3.27	
Competition	competition	Female	3.78	3.57
Competition	competition	Male	3.35	
Competition	contest	Female	3.43	3.33
Competition	contest	Male	3.22	
Competition	game	Female	3.29	3.26
Competition	game	Male	3.23	
Competition	medalist	Female	4.03	3.85
Competition	medalist	Male	3.66	
Competition	race	Female	3.37	3.32
Competition	race	Male	3.27	
Competition	rivalry	Female	2.97	2.96
Competition	rivalry	Male	2.95	
Competition	sport	Female	3.55	3.49
Competition	sport	Male	3.41	

Competition	team	Female	4.26	4.11
Competition	team	Male	3.95	
Competition	tournament	Female	3.01	2.90
Competition	tournament	Male	2.77	
Journey	destination	Female	3.64	3.50
Journey	destination	Male	3.35	
Journey	direction	Female	3.94	3.81
Journey	direction	Male	3.67	
Journey	journey	Female	4.55	4.21
Journey	journey	Male	3.84	
Journey	path	Female	4.07	3.86
Journey	path	Male	3.62	
Journey	progress	Female	4.47	4.29
Journey	progress	Male	4.09	
Journey	road	Female	2.67	2.60
Journey	road	Male	2.54	
Journey	route	Female	2.96	2.94
Journey	route	Male	2.93	
Journey	travel	Female	3.97	3.65
Journey	travel	Male	3.31	
Journey	trip	Female	3.25	3.16
Journey	trip	Male	3.05	
Journey	way	Female	3.46	3.34
Journey	way	Male	3.22	
Plant	blossom	Female	6.15	6.08
Plant	blossom	Male	5.99	
Plant	cultivate	Female	5.04	4.82
Plant	cultivate	Male	4.58	
Plant	fertilize	Female	4.98	4.90
Plant	fertilize	Male	4.82	
Plant	fruit	Female	5.13	4.81
Plant	fruit	Male	4.46	
Plant	harvest	Female	4.70	4.44
Plant	harvest	Male	4.16	
Plant	plant	Female	4.93	4.64
Plant	plant	Male	4.32	
Plant	reap	Female	3.61	3.44
Plant	reap	Male	3.26	
Plant	root	Female	4.08	3.97
Plant	root	Male	3.85	
Plant	seed	Female	4.03	4.08
Plant	seed	Male	4.14	

Plant	sprout	Female	4.42	4.28
Plant	sprout	Male	4.13	
War	army	Female	2.27	2.21
War	army	Male	2.14	
War	assault	Female	2.46	2.37
War	assault	Male	2.26	
War	battle	Female	2.61	2.51
War	battle	Male	2.41	
War	combat	Female	2.43	2.32
War	combat	Male	2.21	
War	enemy	Female	2.45	2.47
War	enemy	Male	2.49	
War	military	Female	2.55	2.45
War	military	Male	2.35	
War	skirmish	Female	2.51	2.40
War	skirmish	Male	2.29	
War	war	Female	2.04	2.06
War	war	Male	2.09	
War	warrior	Female	3.81	3.47
War	warrior	Male	3.09	
War	weapon	Female	2.12	2.14
War	weapon	Male	2.16	

Study 3				
Source domains	Metaphorical keywords	Gender	Means of perceived masculinity-femininity by men and women	Overall means of perceived masculinity-femininity
War	army	Female	2.16	2.09
War	army	Male	1.98	
War	assault	Female	2.42	2.44
War	assault	Male	2.46	
War	battle	Female	2.23	2.17
War	battle	Male	2.08	
War	combat	Female	1.97	1.94
War	combat	Male	1.89	
War	enemy	Female	3.14	3.11
War	enemy	Male	3.06	
War	military	Female	2.29	2.20
War	military	Male	2.08	
War	skirmish	Female	3.56	3.38
War	skirmish	Male	3.13	
War	war	Female	2.00	1.92
War	war	Male	1.81	
War	warrior	Female	2.41	2.21
War	warrior	Male	1.92	
War	weapon	Female	2.39	2.32
War	weapon	Male	2.23	
Competition	championship	Female	3.16	3.11
Competition	championship	Male	3.03	
Competition	competition	Female	3.34	3.22
Competition	competition	Male	3.06	
Competition	contest	Female	3.75	3.65
Competition	contest	Male	3.50	
Competition	medalist	Female	3.90	3.87
Competition	medalist	Male	3.82	
Competition	race	Female	3.68	3.64
Competition	race	Male	3.58	
Competition	rivalry	Female	3.14	3.10
Competition	rivalry	Male	3.04	
Competition	sport	Female	3.04	2.94
Competition	sport	Male	2.80	
Competition	team	Female	4.08	3.99
Competition	team	Male	3.87	
Competition	tournament	Female	3.35	3.37

Competition	tournament	Male	3.39	
Building	architecture	Female	3.27	3.31
Building	architecture	Male	3.37	
Building	building	Female	2.65	2.61
Building	building	Male	2.57	
Building	buttress	Female	4.22	4.31
Building	buttress	Male	4.43	
Building	construction	Female	2.31	2.29
Building	construction	Male	2.26	
Building	foundation	Female	4.40	4.26
Building	foundation	Male	4.04	
Building	framework	Female	3.88	3.88
Building	framework	Male	3.88	
Building	roof	Female	3.32	3.41
Building	roof	Male	3.55	
Building	structure	Female	3.83	3.85
Building	structure	Male	3.89	
Building	support	Female	4.91	4.87
Building	support	Male	4.82	
Building	wall	Female	3.64	3.64
Building	wall	Male	3.64	
Journey	destination	Female	4.26	4.13
Journey	destination	Male	3.96	
Journey	direction	Female	4.18	4.06
Journey	direction	Male	3.89	
Journey	journey	Female	4.55	4.32
Journey	journey	Male	3.99	
Journey	path	Female	4.46	4.34
Journey	path	Male	4.16	
Journey	progress	Female	4.49	4.33
Journey	progress	Male	4.10	
Journey	road	Female	3.68	3.61
Journey	road	Male	3.52	
Journey	route	Female	4.00	3.98
Journey	route	Male	3.94	
Journey	travel	Female	4.33	4.25
Journey	travel	Male	4.14	
Journey	trip	Female	4.26	4.16
Journey	trip	Male	4.02	
Journey	way	Female	4.23	4.19
Journey	way	Male	4.13	
Plant	blossom	Female	5.57	5.55

Plant	blossom	Male	5.51	
Plant	cultivate	Female	4.96	4.85
Plant	cultivate	Male	4.71	
Plant	fertilize	Female	5.01	5.00
Plant	fertilize	Male	4.98	
Plant	fruit	Female	5.53	5.44
Plant	fruit	Male	5.32	
Plant	harvest	Female	4.76	4.63
Plant	harvest	Male	4.45	
Plant	plant	Female	5.21	5.23
Plant	plant	Male	5.26	
Plant	reap	Female	4.28	4.17
Plant	reap	Male	4.01	
Plant	root	Female	4.30	4.28
Plant	root	Male	4.25	
Plant	seed	Female	4.36	4.39
Plant	seed	Male	4.43	
Plant	sprout	Female	5.17	5.09
Plant	sprout	Male	4.97	