Ling 245 Class Project Writeup

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1 Introduction

Recreating Experiment 1 from Bott and Chemla (2016).

2 Things to Note

Need a decent number of observations from each individual on each trial for the analysis Bott and Chemla perform to work. Here, 'decent number' means that we need at least one primeStrength and (WithCat/BetCat) trial with correct prime choices, else there are going to be fewer observations than random effects.

References

Bott, Lewis and Emmanuel Chemla (2016). "Shared and distinct mechanisms in deriving linguistic enrichment". In: *Journal of Memory and Language* 91, pp. 117–140.

Table 1: Experiment 1 results.

		β	S.E.	Z	p-value
Overview	Prime $*$ WithBet + (1 + Prime $*$ WithBet | subject)				
	(Intercept)	-0.594	0.198	-2.991	.003
	Prime	0.563	0.034	16.342	<.001
	WithBet	0.126	0.029	4.284	<.001
	Prime:WithBet	-0.430	0.033	-13.177	<.001
Within simple	Prime	0.993	0.059	16.950	<.001
Between Simple	Prime	0.133	0.033	4.082	<.001
Within detail	Prime $*$ WithCat + (1 + Prime $*$ WithCat | subject)				
	(Intercept)	-2.088	0.255	-8.185	<.001
	Prime	1.239	0.109	11.374	<.001
	WithCatNUM4	2.068	0.195	10.588	<.001
	WithCatSOME	1.823	0.157	11.598	<.001
	Prime:WithCatNUM4	0.174	0.166	1.046	.269
	Prime:WithCatSOME	-0.138	0.137	-1.007	.314
Between detail	Prime $*$ BetCat + (1 + Prime $*$ BetCat | subject)				
	(Intercept)	-0.691	0.204	-3.384	<.001
	Prime	0.145	0.058	0.058	.012
	BetCatSOMEADH	-0.054	0.089	-0.611	.540
	BetCatSOMENUM4	0.889	0.112	7.915	<.001
	Prime:BetCatSOMEADH	-0.069	0.079	-0.873	.383
	Prime:BetCatSOMENUM4	0.078	0.088	0.888	.374

Note. R-pseudo code shown in the first line of every section. *Prime* = priming factor (2 levels: strong, weak). *WithBet* = within/between factor (2 levels: within, between). *WithCat* = within expression category factor (3 levels: *some*, number4, *ad hoc*). *Betcat* = between expression category factor (3 levels: *some* $\leftrightarrow$ number4, *some* $\leftrightarrow$ *ad hoc*, number4 $\leftrightarrow$ *ad hoc*).