

## Experimental Design Tables

**Table S1**

*Number of Trials for All Independent Variable Combinations by List for Expt. 1. Lists: P = Practice, E = Experimental; Accenting: Con = Contrastive, Pres = Presentational.*<sup>1</sup>

List	Color-contrast				Color- + shape-contrast				Shape-contrast	Neither-contrast
	Beat		No beat		Beat		No beat		Beat	No beat
	Con	Pres	Con	Pres	Con	Pres	Con	Pres	Con	Pres
P1.1	1	1	0	0	0	0	1	1	2	2
P1.2	1	1	0	0	0	0	1	1	2	2
P1.3	0	0	1	1	1	1	0	0	2	2
P1.4	0	0	1	1	1	1	0	0	2	2
P2.1	1	1	0	0	0	0	1	1	2	2
P2.2	1	1	0	0	0	0	1	1	2	2
P2.3	0	0	1	1	1	1	0	0	2	2
P2.4	0	0	1	1	1	1	0	0	2	2
E1.1	20	20	0	0	0	0	20	20	40	40
E1.2	20	20	0	0	0	0	20	20	40	40
E1.3	0	0	20	20	20	20	0	0	40	40
E1.4	0	0	20	20	20	20	0	0	40	40
E2.1	20	20	0	0	0	0	20	20	40	40
E2.2	20	20	0	0	0	0	20	20	40	40
E2.3	0	0	20	20	20	20	0	0	40	40
E2.4	0	0	20	20	20	20	0	0	40	40

<sup>1</sup>Assignment of critical experimental trials to beat gesture and pitch accent conditions by contrast type was split across lists because it was believed at the time of design that at least 20 trials per condition per participant were necessary for analysis. Assignment across all conditions for each list was implemented in Expt. 2 (see Table S10).

**Table S2**

*Number of Sentences by Block (Practice, Experimental), Continuation (Context, Critical), and Accenting (Contrastive, Presentational) Used in List Sets 1.1-1.4 and 2.1-2.2.*

Block	Type	Sentence	Accenting	Lists 1.1-1.4	Lists 2.1-2.4
Practice	Critical	Context	Presentational	4	4
		Critical	Contrastive	4	4
			Presentational	4	4
	Filler	Context	Presentational	4	4
		Critical	Contrastive	4	4
			Presentational	4	4
Experimental	Critical	Context	Presentational	80	80
		Critical	Contrastive	80	80
			Presentational	80	80
	Filler	Context	Presentational	80	80
		Critical	Contrastive	80	80
			Presentational	80	80

**Table S3**

*Summary of Experiment 1 and 2 Filler Item Attributes. F Indicates Felicitous Use of Pitch Accenting or Beat Gesture to Convey Contrast; I Indicates Infelicitous Use*

Experiment	Contrast	Cue word	Pitch accent	Gesture
1	Shape	Shape	Contrastive (F)	Beat (F)
1	Neither	Shape	Presentational (F)	None (F)
2	Shape	Color	Contrastive (I)	Beat (I)
2	Shape	Color	Contrastive (I)	None (F)
2	Shape	Color	Presentational (F)	Beat (F)
2	Shape	Color	Presentational (F)	None (I)
2	Neither	Color	Contrastive (I)	Beat (I)
2	Neither	Color	Contrastive (I)	None (F)
2	Neither	Color	Presentational (F)	Beat (I)
2	Neither	Color	Presentational (F)	None (F)

**Table S4**

*Key Independent and Counterbalancing Variables for First Critical Trial by List (1.1-1.4: Click on the blue star. → Now click on the white star.; 2.1-2.4: Click on the blue triangle. → Now click on the white star). Accenting: Con = Contrastive, Pres = Presentational; Object Location: UL = Upper Left, UR = Upper Right, LL = Lower Left, LR = Lower Right; Video Orientation: L = Left, R = Right.*

List	Contrast	Gesture	Accent	Initial object	Target object	Competitor object	Distractor object	Initial location	Target location	Competitor location	Distractor location	Video orientation
1.1	Color	Beat	Con	Blue star	White star	White heart	Blue heart	LR	LL	UR	UL	R
1.2	Color	Beat	Pres	Blue star	White star	White heart	Blue heart	LL	UR	UL	LR	L
1.3	Color	No beat	Con	Blue star	White star	White heart	Blue heart	UR	UL	LR	LL	L
1.4	Color	No beat	Pres	Blue star	White star	White heart	Blue heart	UL	LR	LL	UR	R
2.1	Color + Shape	Beat	Con	Blue triangle	White star	Blue star	White triangle	LR	LL	UR	UL	R
2.2	Color + Shape	Beat	Pres	Blue triangle	White star	Blue star	White triangle	LL	UR	UL	LR	L
2.3	Color + Shape	No beat	Con	Blue triangle	White star	Blue star	White triangle	UR	UL	LR	LL	R
2.4	Color + Shape	No beat	Pres	Blue triangle	White star	Blue star	White triangle	UL	LR	LL	UR	L

**Table S5**

*Key Independent and Counterbalancing Variables for First Filler Trial by List for Expt. 1. (1.1-1.4: Click on the white circle. → Now click on the white star.; 2.1-2.4: Click on the white star. → Now click on the white star again). Accenting: Con = Contrastive, Pres = Presentational; Object Location: UL = Upper Left, UR = Upper Right, LL = Lower Left, LR = Lower Right; Video Orientation: L = Left, R = Right. Note: Target and Initial Objects are Identical (White Star) for Lists 2.1-2.4.*

List	Contrast	Gesture	Accent	Initial object	Target object	Competitor object	Distractor object	Initial location	Target location	Competitor location	Distractor location	Video orientation
1.1	Shape	Beat	Con	White circle	White star	Red star	Red circle	UL	LR	LL	UR	R
1.2	Shape	Beat	Con	White circle	White star	Red star	Red circle	LR	LL	UR	LR	R
1.3	Shape	Beat	Con	White circle	White star	Red star	Red circle	LL	UR	LR	UL	L
1.4	Shape	Beat	Con	White circle	White star	Red star	Red circle	UR	LR	UL	LL	L
2.1	Neither	No beat	Pres	White star	White star	White circle	Red circle	UL	LR	LL	UR	R
2.2	Neither	No beat	Pres	White star	White star	White circle	Red circle	LR	LL	UR	LR	L
2.3	Neither	No beat	Pres	White star	White star	White circle	Red circle	LL	UR	LR	UL	R
2.4	Neither	No beat	Pres	White star	White star	White circle	Red circle	UR	LR	UL	LL	L



**Table S7**

*Key Independent and Counterbalancing Variables for First Filler Trial by List for Expt. 2. (1.1-1.4: Click on the white circle. → Now click on the white star.; 2.1-2.4: Click on the white star. → Now click on the white star again). Accenting: Con = Contrastive, Pres = Presentational; Object Location: UL = Upper Left, UR = Upper Right, LL = Lower Left, LR = Lower Right; Video Orientation: L = Left, R = Right. Note: Target and Initial Objects are Identical (White Star) for Lists 2.1-2.4.*

List	Contrast	Gesture	Accent	Initial object	Target object	Competitor object	Distractor object	Initial quadrant	Target quadrant	Competitor quadrant	Distractor quadrant	Video orientation
1.1	Shape	Beat	Con	White circle	White star	Red star	Red circle	UL	LR	LL	UR	R
1.2	Shape	Beat	Pres	White circle	White star	Red star	Red circle	LR	LL	UR	LR	R
1.3	Shape	Beat	Con	White circle	White star	Red star	Red circle	LL	UR	LR	UL	L
1.4	Shape	Beat	Pres	White circle	White star	Red star	Red circle	UR	LR	UL	LL	L
2.1	Neither	No beat	Con	White star	White star	White circle	Red circle	UL	LR	LL	UR	R
2.2	Neither	No beat	Pres	White star	White star	White circle	Red circle	LR	LL	UR	LR	L
2.3	Neither	No beat	Con	White star	White star	White circle	Red circle	LL	UR	LR	UL	R
2.4	Neither	No beat	Pres	White star	White star	White circle	Red circle	UR	LR	UL	LL	L

**Table S8**

*Number of Videos by Block (Practice, Experimental), Continuation (Context, Critical),*

*Accenting (Contrastive, Presentational), and Gesture (Beat, No Beat) Used in List Sets 1.1-1.4*

*and 2.1-2.2 in Expt. 1.*

Block	Type	Sentence	Gesture	Accent	Lists 1.1-1.4	Lists 2.1- 2.4
Practice	Critical	Context	No beat	Presentational	4	4
			Beat	Contrastive	4	4
		Critical	Beat	Presentational	4	4
			No beat	Contrastive	4	4
			No beat	Presentational	4	4
	Filler	Context	No beat	Presentational	4	4
			Beat	Contrastive	4	4
		Critical	No beat	Presentational	4	4
			Beat	Contrastive	4	4
			No beat	Presentational	4	4
Experimental	Critical	Context	No beat	Presentational	80	80
			Beat	Contrastive	80	80
		Critical	Beat	Presentational	80	80
			No beat	Contrastive	80	80
			No beat	Presentational	80	80
	Filler	Context	No beat	Presentational	80	80
			Beat	Contrastive	80	80
		Critical	No beat	Presentational	80	80
			Beat	Contrastive	80	80
			No beat	Presentational	80	80