

Motion-Binding Property Contributes to Accurate Temporal-Order Perception in Audiovisual Synchrony

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Supplementary Material

Table S1. Results of Experiment 1. A paired t -test was used to compare the results between the motion-binding and simultaneous conditions. The table reports the results of paired t -tests of PSSs and JNDs, indicating a significant difference between the TOJ tasks in the motion-binding condition and those in the simultaneous condition

Participant ID	PSS		Paired t -test
	Motion-binding condition	Simultaneous condition	
1	-15.0555	-11.3869	$t_{11} = -2.42, p = 0.034$
2	-8.9263	11.0071	
3	-5.0202	11.9588	
4	2.9726	11.0278	
5	17.0085	23.2892	
6	-13.1464	39.5596	
7	-23.0621	-25.5759	
8	27.4401	39.3073	
9	6.1057	16.3806	
10	-19.0777	-7.0098	
11	-35.2774	49.0364	
12	23.1689	15.1105	
Mean	-3.5725	14.3921	
SE	5.3468	6.0592	
JND			
	Motion-binding condition	Simultaneous condition	$t_{11} = -4.49, p = 0.0009$
1	23.5572	36.671	
2	12.5701	19.0954	
3	24.1814	46.8031	
4	13.5187	22.3904	
5	16.062	28.8033	
6	28.6706	41.9336	
7	13	32.5782	

8	30.0911	25.0505
9	64.4957	91.1154
10	12.0183	20.8981
11	52.8937	80.7277
12	26.0231	26.4444
Mean	26.4235	39.3759
SE	4.5913	6.4698

JND, just-noticeable difference; PSS, point of subjective simultaneity; TOJ, temporal-order judgment.

Table S2. Results of Experiment 2. A repeated-measures ANOVA and pairwise comparisons with Holm correction were used to compare the results in the motion-binding condition and those in the short and long successive interval conditions. The table indicates a statistically significant difference between the motion-binding and the short and long successive interval conditions

Participant	PSS			ANOVA and multiple comparisons
ID	Motion-binding condition	Short successive condition (SOA: 40 ms)	Long successive condition (SOA: 300 ms)	with Bonferroni correction
1	27.4401	37.0438	46.5625	$F_{2,22} = 8.473, p = 0.002$, motion-binding condition and an SOA of 40 ms: $p = 0.009$; motion-binding condition and an SOA of 300 ms: $p =$ 0.03
2	-38.9284	-24.7695	-31.7091	
3	9.2145	17.0094	25.1302	
4	21.0251	42.9797	19.0541	
5	-34.6532	-15.0715	-23.1365	
6	9.1909	23.1204	13.9182	
7	-51.2605	-11.9006	-4.1113	
8	15.0007	47.0571	33.4416	
9	17.0414	33.0630	37.5104	
10	-9.0177	17.5998	44.6081	
11	-21.9816	-24.6396	-13.8306	
12	-9.1480	-21.2079	-17.9949	
Mean	-5.5064	10.0237	10.7869	
SE	7.2208	7.6803	7.7047	

JND				
	Apparent	Short	Long	
	motion	successive	successive	
	condition	condition (soa:	condition (soa:	
		40 ms)	300 ms)	
1	30.0911	18.6933	43.5283	$F_{2,22} = 6.053, p = 0.008,$ motion-binding condition and an SOA of 40 ms: $p = 0.304$; motion-binding condition and an SOA of 300 ms: $p =$ 0.002
2	12.5759	58.9559	32.0663	
3	33.5749	17.3873	47.0668	
4	19.5041	13.0744	22.4218	
5	9.2411	24.5433	25.0615	
6	32.7308	48.4810	43.9426	
7	35.9655	45.9375	80.1078	
8	13.9215	17.4863	28.4102	
9	21.9940	20.2512	28.2101	
10	21.6885	36.4653	44.6085	
11	38.9102	43.5374	68.3333	
12	31.0251	27.6170	41.5311	
Mean	25.1019	31.0358	42.1074	
SE	2.7447	4.1722	4.8074	

ANOVA, analysis of variance; JND, just-noticeable difference; PSS, point of subjective simultaneity; SOA, stimulus onset asynchrony.