Supplementary materials

Table S1. Means (color-coded) and standard deviations of dependent variables per scenario (*N* = 35).

Scenario number	Conflict angle (deg)	Conflict	1. Fixation rate (Hz)		2. Mean fixation duration (ms)		3. Mean saccade amplitude (pixels)		3. Mean fixation amplitude (pixels)		Proportion of time on Dot 1		Proportion of time on dots AOI		Proportion of time on CP AOI		Performance score (%)		Self-reported difficulty (0-10)		Self-reported difficulty (0-10)		Number of spacebar presses (#)	
1	30	Yes	0.566	0.218	1194	452	126	38	39	15	0.750	0.139	0.951	0.039	0.262	0.050	60.772	15.909	5.214	1.655	5.214	1.655	1.01	0.08
2	30	Yes	0.674	0.289	1000	440	106	26	35	15	0.558	0.175	0.947	0.031	0.262	0.036	64.653	13.664	4.629	1.601	4.629	1.601	1.01	0.08
3	30	Yes	0.726	0.264	1041	479	112	30	38	17	0.732	0.132	0.932	0.063	0.275	0.042	62.305	15.904	5.071	1.520	5.071	1.520	1.01	0.08
4	30	No	0.670	0.301	1245	523	121	41	42	19	0.232	0.138	0.952	0.048	0.237	0.049	80.625	15.856	5.086	1.881	5.086	1.881	0.60	0.42
5	30	No	0.711	0.246	1111	473	155	65	39	14	0.503	0.160	0.946	0.025	0.250	0.035	86.654	14.155	5.286	2.136	5.286	2.136	0.44	0.40
6	30	No	0.896	0.365	977	359	110	23	40	17	0.636	0.163	0.937	0.052	0.283	0.046	91.792	11.124	3.943	1.748	3.943	1.748	0.26	0.33
7	100	Yes	1.116	0.306	783	259	187	44	32	15	0.707	0.090	0.711	0.123	0.399	0.094	50.999	19.775	5.557	2.068	5.557	2.068	1.11	0.27
8	100	Yes	1.226	0.365	723	268	215	45	38	20	0.625	0.111	0.739	0.131	0.335	0.048	55.816	18.447	5.414	1.873	5.414	1.873	1.07	0.18
9	100	Yes	1.144	0.388	788	365	191	52	36	17	0.529	0.128	0.671	0.153	0.345	0.052	53.956	17.928	5.757	1.729	5.757	1.729	1.03	0.12
10	100	No	1.211	0.330	752	215	184	46	28	13	0.655	0.133	0.687	0.124	0.401	0.093	70.112	14.323	6.571	1.582	6.571	1.582	0.86	0.38
11	100	No	1.121	0.373	878	395	176	42	36	15	0.742	0.117	0.732	0.131	0.318	0.056	82.180	16.101	5.614	1.922	5.614	1.922	0.57	0.39
12	100	No	1.183	0.379	806	270	187	48	37	17	0.604	0.129	0.680	0.150	0.314	0.059	75.206	15.799	6.243	1.804	6.243	1.804	0.76	0.46
13	150	Yes	1.324	0.305	648	178	243	59	30	17	0.555	0.125	0.659	0.147	0.458	0.114	54.295	14.676	5.657	1.748	5.657	1.748	1.09	0.23
14	150	Yes	1.378	0.348	638	203	228	49	34	22	0.665	0.099	0.685	0.151	0.445	0.096	57.644	17.003	5.171	1.761	5.171	1.761	1.04	0.19
15	150	Yes	1.200	0.381	735	304	219	53	39	20	0.629	0.107	0.645	0.148	0.459	0.090	54.298	16.902	5.386	1.871	5.386	1.871	1.07	0.18
16	150	No	1.334	0.366	735	278	237	50	35	21	0.582	0.121	0.670	0.145	0.478	0.133	88.244	12.186	4.743	1.550	4.743	1.550	0.47	0.42
17	150	No	1.397	0.426	690	307	233	50	32	17	0.636	0.120	0.705	0.142	0.451	0.107	80.997	16.776	5.700	1.733	5.700	1.733	0.56	0.43
18	150	No	1.371	0.390	711	320	218	52	35	20	0.669	0.092	0.634	0.147	0.442	0.088	80.906	17.119	5.529	1.863	5.529	1.863	0.61	0.46

Note. The results for each participant were averaged for the 18 continuous scenarios and the 18 discrete scenarios. The additional measure 'proportion of time on Dot 1' represents the proportion of time that the gaze coordinate was closer to Dot 1 than to Dot 2. CP = conflict point.

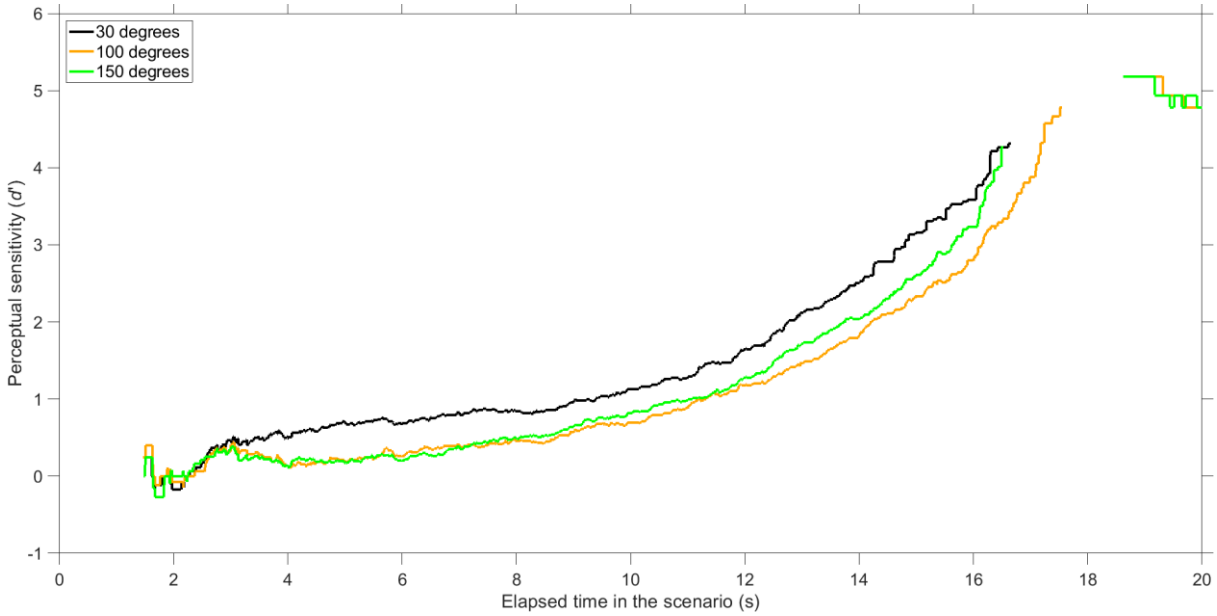

Figure S1. Perceptual sensitivity (*d'*) as a function of elapsed time during the scenario, calculated from the results shown in Figures 3 and 4. It can be seen that perceptual sensitivity is highest for 30 deg conflict angles. Also, perceptual sensitivity increases with elapsed time, which can be explained because it gradually becomes evident whether or not a collision will occur.

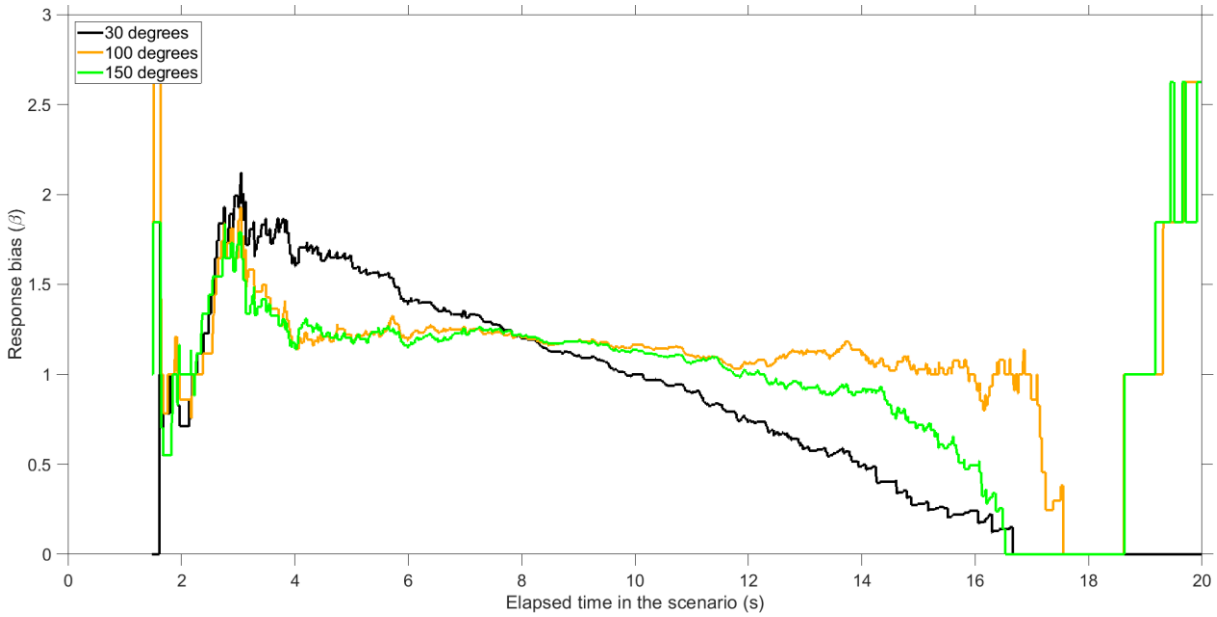

Figure S2. Response bias (β) as a function of elapsed time, calculated from the results shown in Figure 3 (showing hit rates) and Figure 4 (showing false alarm rates). β = 1 would represent an 'ideal observation' where the miss rate equals the false positive rate. It can be seen that β is about 1 for 100 deg and 150 deg conflict angles, whereas β decreases with elapsed time for 30 deg conflict angles. To illustrate, at about 16 seconds into the 30-deg scenarios, the miss rate was low (1%, or 99% hit rate) but the false alarm rate was high (8%), indicating that participants were cautious (i.e., liberal, low β) at that point in time. In other words, in non-conflict scenarios, some participants kept pressing the spacebar to indicate that the dots could collide even

when the dots would not collide, an effect that may be due to a delay in the human response.

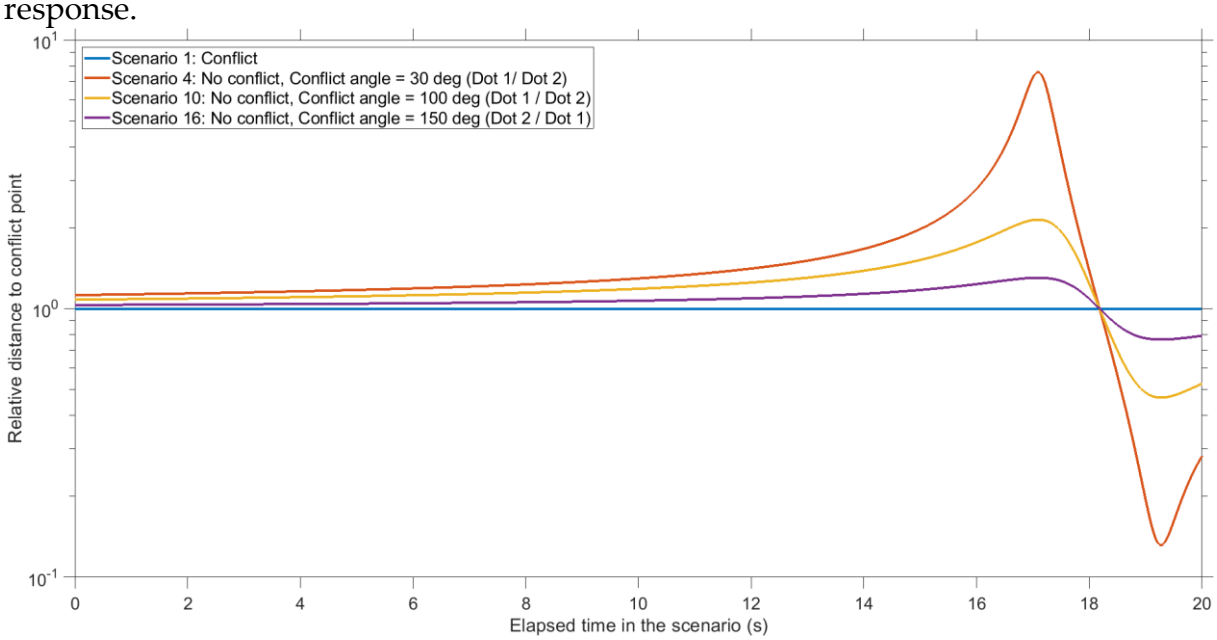

Figure S3. Ratio between the distance from Dot 1 to the conflict point and the distance from Dot 2 to the conflict point. For example, if the value equals 2, then one dot is twice as far from the conflict point as the other dot. Note that the closest point of approach is at 18.3 s.

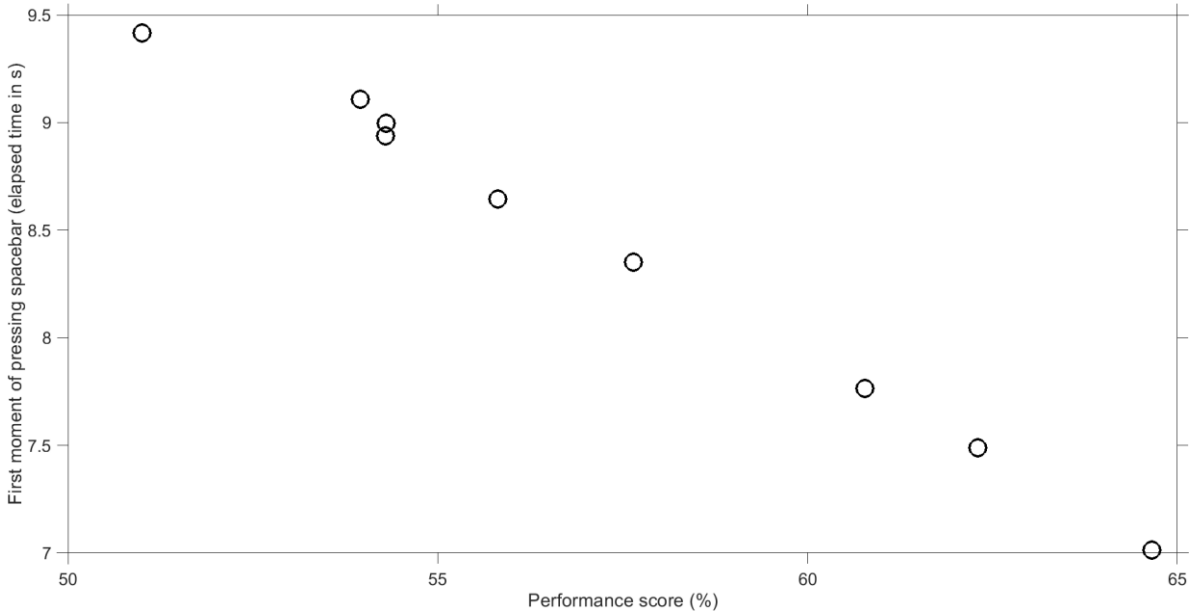

Figure S4. Mean first moment of pressing the spacebar versus mean performance score for conflict scenarios. Each marker represents the average of 35 participants and 2 scenarios (discrete and continuous scenarios are combined). The strong correlation indicates that the moment of pressing the spacebar and the performance score are redundant variables at the level of scenarios.