APPENDIX 3: CHANGE IN SUBJECTS' BEHAVIOR ON A SET OF ROUNDS FOR SESSIONS OF EXPERIMENTS 1, 2 AND 3 USING THE COCHRAN CHANGE TEST

		SESSION 1.1			SESSION 1.2			SESSION 2.1			SESSION 2.2			SESSION 3.2		
ROUNDS	**number of rounds**	**decision at 0.05**	**decision at 0.01**	**critical Alpha**	**decision at 0.05**	**decision at 0.01**	**critical Alpha**	**decision at 0.05**	**decision at 0.01**	**critical Alpha**	**decision at 0.05**	**decision at 0.01**	**critical Alpha**	**decision at 0.05**	**decision at 0.01**	**critical Alpha**
1 à 5	**5**	H0	H0	0.176	H0	H0	0.144	H0	H0	0.117	H1	H1	0.000	H0	H0	0.176
1 à 6	**6**	H0	H0	0.154	H0	H0	0.124	H0	H0	0.104	H1	H1	0.000	H0	H0	0.183
1 à 7	**7**	H0	H0	0.212	H0	H0	0.104	H0	H0	0.174	H1	H1	0.000	H0	H0	0.265
1 à 8	**8**	H0	H0	0.288	H1 (2)	H0	0.085	H0	H0	0.226	H1	H1	0.000	H0	H0	0.340
1 à 9	**9**	H0	H0	0.237	H1	H0	0.024	H0	H0	0.246	H1	H1	0.000	H0	H0	0.387
1 à 10	**10**	H0	H0	0.248	H1	H1	0.005	H0	H0	0.274	H1	H1	0.000	H0	H0	0.450
1 à 5	**5**	H0	H0	0.176	H0	H0	0.144	H0	H0	0.117	H1	H1	0.000	H0	H0	0.175
6 à 10	**5**	H0	H0	0.535	H0	H0	0.111	H0	H0	0.653	H0	H0	0.835	H0	H0	0.672
11 à 15	**5**	H1	H0	0.040	H0	H0	0.902	H0	H0	0.137	H1	H0	0.032	H0	H0	0.660
16 à 20	**5**	H0	H0	0.789	H1	H0	0.019	H1	H0	0.044	H1	H0	0.017	H0	H0	0.439
21 à 25	**5**	H0	H0	0.474	H0	H0	0.746	H0	H0	0.885	H0	H0	0.938	H0	H0	0.293
26 à 30	**5**	H0	H0	0.146	H0	H0	0.331	H0	H0	0.231	H0	H0	0.517	H0	H0	0.563
1 à 5	**5**	H0	H0	0.176	H0	H0	0.144	H0	H0	0.117	H1	H1	0.000	H0	H0	0.176
1 à 10	**10**	H0	H0	0.248	H1	H1	0.005	H0	H0	0.274	H1	H1	0.000	H0	H0	0.450
1 à 15	**15**	H1	H1	0.004	H1	H1	0.000	H0	H0	0.252	H1	H1	0.000	H0	H0	0.704
1 à 20	**20**	H1	H1	0.007	H1	H1	0.000	H0	H0	0.241	H1	H1	0.000	H0	H0	0.714
1 à 25	**25**	H1	H0	0.013	H1	H1	0.000	H1	H0	0.029	H1	H1	0.000	H0	H0	0.243
1 à 30	**30**	H1	H1	0.000	H1	H1	0.000	H1	H0	0.015	H1	H1	0.000	H1	H1	0.009
1 à 10	**10**	H0	H0	0.248	H1	H1	0.005	H0	H0	0.274	H1	H1	0.000	H0	H0	0.450
11 à 20	**10**	H0	H0	0.275	H1	H1	0.007	H0	H0	0.182	H1	H0	0.014	H0	H0	0.736
21 à 30	**10**	H1 (1)	H0	0.053	H0	H0	0.811	H0	H0	0.675	H0	H0	0.779	H0	H0	0.413

(1) The change is significant for a Type I error near 0.05. (2) The change is significant for a Type I error at 0.10.

H0: the probability of choosing P1 is the same for each round of the specified set of rounds

H1: the probability of choosing P1 differ according to the round of the specified set of rounds

On the use of this test : the nonparametric Cochran test has been selected because our purpose was to test statistical significance of a change in participants' behavior on a set of rounds. It is an extension of the Mc Nemat test to k samples or k rounds (a "before and after" type of test). We compare k related samples including the same individuals and the study uses a nominal or categorical measurement of the changes (period 1 or period 2). The equivalent parametric test, assessing differences of observations between k samples, is not applicable as it requires at least an interval measurement of observations. It is worth noting that the F parametric test, contrary to the nonparametric one, would have required a strict compliance with the following hypotheses : the observations are independently drawn from populations having normal distributions with a constant variance.