

**Table S1.** Estimated marginal means of the proportion of time spent drinking, standing, walking and performing comfort or other behaviors for birds that were raised under standard conditions (C); with physical items (P); or with additional human contact (HC). Differing superscript indicates a significant difference at  $p < 0.05$  between treatment groups. Bold font indicates significant  $p$ -values at  $p < 0.05$ .

	C	P	HC	SEM	<i>p</i> -Value		
					Treatment	Age	Treatment × Age
Drinking	0.27	0.29	0.29	0.02	0.728	0.670	0.722
Standing	0.73	0.72	0.85	0.04	0.124	<b>&lt;0.001</b>	0.066
Walking	0.58	0.57	0.64	0.03	0.462	<b>&lt;0.001</b>	0.104
Comfort	0.72 <sup>a</sup>	0.54 <sup>b</sup>	0.72 <sup>a</sup>	0.03	<b>0.005</b>	<b>&lt;0.001</b>	0.163
Other	0.00	0.00	0.00	0.01	0.376	<b>0.001</b>	0.384

**Table S2.** Indicators of fearfulness (estimated marginal means and SEM) during the open field test for chickens that were raised under standard conditions (Control; C), with additional physical items (P) or with additional human contact (HC) and model SEM are reported for birds tested at 21 and 35 days of age. Bold font indicates significant  $p$ -values at  $p < 0.05$ .

Age	Variable	C	P	HC	SEM	<i>p</i> -Value		
						Treatment	Sex	Trt × Sex
21 days	Vocalizations	205.7	242.8	240.0	10.7	0.389	<b>0.005</b>	0.138
	Latency to vocalize (s)	13.1	6.5	6.7	1.42	0.174	0.331	0.769
	Time spent immobile (s)	5.7	6.2	4.5	1.94	0.949	0.704	0.903
	Attempted to escape (%)	0.8	0.8	0.6	0.07	0.233	0.254	0.569
	Defecations	1.3	1.0	1.4	0.12	0.523	0.087	0.841
35 days	Vocalizations	76.1	46.6	41.6	8.70	0.710	<b>0.043</b>	0.995
	Latency to vocalize (s)	10.4	13.5	13.5	1.90	0.589	0.064	0.562
	Time spent immobile (s)	11.3	5.6	8.3	2.27	0.844	0.271	0.366
	Attempted to escape (%)	0.8	1.0	0.8	0.05	0.411	0.297	0.174
	Defecations	1.02	1.34	1.07	0.13	0.414	0.604	0.643

**Table S3.** Estimated marginal means distance from stationary human (HAP) and the distance the chicken moved away from the approaching human (HAV) when chickens that were raised under standard conditions (Control); with additional physical items (P); or with additional human contact (HC). Differing superscript within a column indicates treatment differences at  $p < 0.05$ . Bold font indicates significant  $p$ -values at  $p < 0.05$ .

	C	P	HC	SEM	<i>p</i> -Value
HAP (cm)	65.5 ± 4.3 <sup>a</sup>	67.6 ± 4.3 <sup>a</sup>	53.1 ± 4.1 <sup>b</sup>	2.5	<b>0.052</b>
HAV (cm)	38.0 ± 4.9 <sup>a</sup>	29.5 ± 5.2 <sup>a</sup>	18.9 ± 4.7 <sup>b</sup>	3.1	<b>0.019</b>