

## Appendix

*Acquisition.* On the last trial of acquisition, mean response rate in the reinforced response alternative were 0, 1.87 ( $\pm 1.87$ ), 1.87 ( $\pm 1.30$ ) and 0 during the Pre period and 50.62 ( $\pm 3.85$ ), 56.25 ( $\pm 5.34$ ), 59.06 ( $\pm 5.42$ ) and 59.53 ( $\pm 5.19$ ) during the Stimulus period for stimuli S1, S2, S3 and S4, respectively. Response rates in the unreinforced response alternative were 1.87 ( $\pm 1.87$ ), 0, 0 and 0, during the Pre period, and 7.03 ( $\pm 2.51$ ), 14.53 ( $\pm 7.63$ ), 4.68 ( $\pm 2.64$ ), and 2.81 ( $\pm 1.95$ ) during the Stimulus period, for stimuli S1, S2, S3 and S4 respectively. A 2 (Period, Pre vs. Stimulus) x 2 (Response, Reinforced vs. No-reinforced) x 4 (Stimulus, S1 vs. S2 vs. S3 vs. S4) ANOVA in the last trial of acquisition found a significant main effect of Period,  $F(1, 31) = 140.82$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .41$ , and Response,  $F(1, 31) = 120.08$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .30$ . The interaction Period x Response was significant as well,  $F(1, 31) = 126.69$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .29$ . No other effect or interactions were found to be significant, largest  $F(3, 93) = 2.27$ ,  $p = .084$ . Detailed analysis conducted to explore Period x Response interaction found that simple effect of Period was significant in both, Reinforced,  $F(1, 31) = 203.42$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .73$ , and No-reinforced,  $F(1, 31) = 5.79$ ,  $p = .022$ ,  $\eta_{\text{ges}}^2 = .08$ , responses. At the end of acquisition, responding was higher during the Stimulus period than during the Pre period, regardless of whether the response was reinforced or not. Note that participants are required to save their ammunition in a situation in which they are also instructed about the limited range of their weapons (they could only reach enemies when S is presented). These instructions, together with the explicit requirement of saving the ammunition, make the effect previously reported congruent with the cover story: to optimize performance participants responded on a higher rate when they can reach enemies, that is, on Stimulus-period. Moreover, the simple effect of Response was significant during the Stimulus-period,  $F(1, 31) = 123.89$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .60$ , but it was not significant during Pre-period,  $F(1, 31) = 2.07$ ,  $p = .161$ ,

showing that participants differentially chose the alternative that was followed by reinforcement in the presence of the stimulus, but not in its absence.

*Extinction.* To test the effect of the extinction treatment, we compared performance at the end of the acquisition training with performance at the end of the extinction training. On the last trial of acquisition (24), mean rate of responding when the to-be-extinguished stimulus (S1) was absent (Pre-period) was 0, whereas mean rate of responding when this stimulus was present (Stimulus-period) was 52.03 ( $\pm 3.81$ ). However, on the last trial of extinction (30) these rates were 0.47 ( $\pm 2.65$ ) and 14.06 ( $\pm 3.36$ ), respectively. A 2 (Period, Pre vs. Stimulus)  $\times$  2 (Trial, 24 Acquisition vs. 30 Extinction) ANOVA found significant effects of Period,  $F(1, 31) = 161.60$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .57$  and Trial,  $F(1, 31) = 54.39$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .30$ . Interaction Period  $\times$  Trial was significant,  $F(1, 31) = 56.21$ ,  $p < .001$ ,  $\eta_{\text{p}}^2 = .31$ . Further analysis carried out to explore the Period  $\times$  Trial interaction found that the simple effect of Trial was significant only in the Stimulus period,  $F(1, 31) = 55.77$ ,  $p < .001$ ,  $\eta_{\text{ges}}^2 = .47$ . That is, response rate at the end of extinction was significantly lower than response rate at the end of acquisition only when the stimulus was present (Stimulus period). Pre period response rate did not differ between both trials,  $F = 1$ .