Supplemental Analyses.

Experiment 1.

*Score replacement and exclusion criteria.* Missing scores for the Phase 1 (conditioning) phase were replaced with the mean of the adjacent scores available for each individual subject. This was the case for one subject in Group Extinction-Delayed and two subjects in Group Extinction-Immediate. For one subject in Group Control-Immediate, the first 4-trial block was not calculable; for this subject, the first block score was replaced with the score recorded during the second block. No score was replaced for the last block of trials. Two subjects in each of Groups Extinction-Immediate and Extinction-Delayed failed to respond through the extinction session and were thus excluded from the analyses. Because failing to respond during the extinction session did not preclude subjects from receiving the scheduled presentations of X, all available data were included in the spontaneous recovery analyses. One subject in Group Extinction-Delayed failed to respond through the spontaneous recovery session and was excluded from the analyses. Supplemental Figure 1 presents the scores recorded without replacement.

Experiment 2.

*Score replacement and exclusion criteria.* Because only two scores were analyzed during the conditioning session, data replacement was not applied to Experiment 2. Three subjects in each of the Extinction-Immediate and Control-Immediate groups and two subjects in the Control-Delayed group did not contribute scores to the conditioning analyses because they exhibited full suppression after the third conditioning trial. This reflects acquisition of the fear contingency and did not preclude them from receiving the subsequent X-Shock pairings; thus, their data were not excluded from the spontaneous recovery analyses. Two subjects in Group Control-Delay and one subject in Group LI-Delay failed to respond through the spontaneous recovery test session; thus, their data were excluded from the spontaneous recovery analyses.

Experiment 3.

*Score replacement and exclusion criteria.* Score replacement was applied to two subjects in Group Control-Immediate and one subject in Group CC-Immediate in the counterconditioning analyses. These subjects failed to respond during the first block of trials, but started and continued to respond in subsequent trials; thus, their missing score was replaced with their second-block score. One subject in group CC-Delayed did not contribute scores to the spontaneous recovery analyses. Supplemental Figure 2 presents the scores recorded without replacement.
Supplemental Figure 1. Experiment 1 without score replacement. Panel A presents mean response ratios (± SEMs) over four-trial blocks for the interference (extinction) phase. Panel B presents mean response ratios (± SEMs) over three-trial blocks for the spontaneous recovery test, which occurred 72 h after extinction. Lower ratios reflect more response suppression (more fear), which is consistent with original (X-Shock) training, whereas higher ratios reflect less suppression (less fear) which is consistent with extinction (X-noShock) training (i.e., retroactive interference).
Supplemental Figure 2. Experiment 3 without score replacement. Dashes (‘-’) represent paired presentations whereas slashes (‘/’) represent unpaired presentations. Panel A presents mean response ratios (± SEMs) over four-trial blocks for the interference (counterconditioning [CC]) phase of Experiment 3. Panel B presents mean response ratios (± SEMs) over two-trial blocks for the spontaneous recovery test, which occurred 48 h after CC treatment. Lower ratios reflect more response suppression (more fear), which is consistent with original (X-Shock) training, whereas higher ratios reflect less suppression (less fear) which is consistent with counterconditioning (X-Sucrose) training (i.e., retroactive interference).