

Supplementary material of ‘From Adaptive to Maladaptive Fear: Heterogeneity in Threat and Safety Learning across Response Systems in a Representative Sample’

Femke J. Gazendam^{1, 2}, Angelos-Miltiadis Kryptos³, Jan H. Kamphuis¹, Andries R. van der Leij¹, Hilde M. H. Huizenga¹, Annemarie Eigenhuis¹, & Merel Kindt^{1, 2}

¹ University of Amsterdam

² Amsterdam Brain and Cognition

³ Utrecht University

Author Note

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Correspondence concerning this article should be addressed to Femke J. Gazendam, University of Amsterdam, Faculty of Social and Behavioral Sciences, Department of Clinical Psychology, Nieuwe Achtergracht 129, 1018 WT Amsterdam, The Netherlands. E-mail: Femke.Gazendam@gmail.com

Supplementary material of ‘From Adaptive to Maladaptive Fear: Heterogeneity in Threat and Safety Learning across Response Systems in a Representative Sample’

Analyses for testing conditioning for the whole sample and for each class separately

Here, we describe the analyses performed for each associative fear learning phase. The same analyses were run across the different measures (i.e., distress, startle response, skin conductance responses), as well as for all the different classes within each measure. It is advised that the reader consults not only the p -values but also the accompanying effect sizes for interpreting the results on the different tables.

For acquisition, we run a 2 (stimulus: CS+ vs. CS-) \times (trial: 1-6) repeated measures analyses of variance, with stimulus and trial serving as within-subject factors. The same analyses were run for extinction, the gs morph trials, the gs new trials, and the re-extinction trials, by adjusting the number of the trial factor to each phase (i.e., 12, 2, 2, and 4 respectively). For reinstatement, the trial factor was set to 2, with the first level of the factor referring to the post-generalization trial, and the second level referring to the 1st trial of the re-extinction phase. For the Generalization to Morph (GS Morph) and Generalization to New (GS New), we run separate paired samples t -tests with the mean for CS- at the final extinction trial (trial 12) and the mean of trial 1 of the Morph or the New stimulus. The same analyses were run across the different measures. In addition, these analyses were performed for all the different classes within each measure.

Data reevaluation

Startle EMG.. For the startle response data, an analog notch filter was set at 50 Hz to remove interference of the mains noise. The raw EMG signal was amplified and

band-pass filtered (28–500 Hz butterworth 4th order) (Blumenthal et al., 2005; Van Boxtel et al., 1998). Startle magnitude was defined as the amplitude (measurement unit: μV) of the first peak within a 20–200 ms interval following the startle probe onset. Trials with excessive baseline activity or recording artifacts were discarded by the Vsrrp program. To reduce inter-individual variation in baseline EMG activity, the raw EMG data were converted to proportional change scores $((X - \text{baseline}) / \text{baseline})$ (e.g., Tabachnick & Fidell, 2000; Walker & Davis, 2002). Baseline was determined as the average startle reactivity of an individual's noise alone trials (of the entire experiment). ### Electrodermal activity. The skin conductance responses were calculated by subtracting a baseline of the mean 1 s before CS presentation from the maximum of the following 7 s during CS presentation (Milad, Orr, Pitman, & Rauch, 2005; Pineles, Orr, & Orr, 2009). SCR data were analyzed by the recommended entire interval response (EIR) method (Pineless et al., 2009).

Descriptive statistics

SES, Contraceptives, and UCS intensity. Our sample included individuals representative of the entire Dutch population, which clearly differs from the usual population tested in similar research (i.e. university students). Therefore we examined whether individuals coming from different social economic backgrounds (SES) would show differences in fear acquisition. In addition, we tested whether UCS (shock) intensity was related to an index of acquisition (the mean of the final two differential acquisition trials). Also, given that use of contraceptives can affect (associative fear) learning (see e.g. the work of Cahill and colleagues; Lebron-Milad & Milad, 2012), we tested whether fear acquisition differed within females that were taking ($n = 290$) or not taking ($n = 179$) contraceptives. Our analyses suggested that the UCS intensity did not correlate with the acquisition index for any conditioning measure (all $ps > .356$). Also, visual inspection of each plot revealed that individuals across SES classes had similar fear acquisition, and specifically, that data of the subgroup categorized as the lowest SES participants did not deviate from the remainder. Lastly, no differences were observed for women who were and were not taking contraceptives, $t(303.46) = 0.76$, $p = 0.45$.

Retrospective evaluation of stimuli. Retrospectively, several questions evaluated the degree to which the participant showed recognition of the presented stimuli and assessed the risk (that the face would be followed by an electrical stimulus) for each stimulus (scales ranging from -100 to 100). Results indicated that participants on average rated that they recognized the danger, safety, new and morph stimulus (see Suppl. Table 1). Further, for the risk estimation, the risk was rated as highest for the danger stimulus and the safety stimulus was rated as safest. Next, relatively more risk uncertainty was rated for the GS morph than for the GS new (see Suppl. Table 1).

Table 1

Description of Low and High Scorers and the reliabilities (alpha) for the selected MPQ Scales Stress Reaction, Harmavoidance and Wellbeing, and the Means and Standard Deviations (T-scores).

Scales	Description of a low scorer	Description of a high scorer	Reliability of the scale (N=924) Cronbach's alpha	Mean SD
Stress Reaction	Can put fears and worries out of her (his) mind; quickly gets over upsetting experiences; is not troubled by emotional turmoil or guilt feelings.	Is tense and nervous; is sensitive, feels vulnerable; is prone to worry and feel anxious; is irritable and easily upset.	alpha = .846 (9.37)	46 (9.37)
Harm Avoidance	Does or would enjoy dangerous and exciting experiences and activities.	Avoids excitement and threat; prefers safe activities even if they are tedious.	alpha = .752	40.74 (10.83)
Wellbeing	Seldom really happy; Does not seem to experience excitement and fun in life	Optimist; Feels good about self; Sees bright future; Enjoys things (s)he does	alpha = .822	51.86 (10.59)

Table 2

Means and standard deviations of the recognition and risk ratings for the conditioned and generalization stimuli.

	Recognition CS1	Recognition CS2	Recognition GS New	Recognition GS Morph
Whole sample	89.83 (38.15)	88.24 (40.84)	74.25 (54.90)	86.59 (41.78)
	Risk CS1	Risk CS2	Risk GS New	Risk GS Morph
Whole sample	52.55 (50.04)	-52.34 (59.95)	-41.59 (60.29)	-13.52 (61.88)

Table 3

Results of the main statistical analyses conducted for the Distress ratings across the whole sample (n = 924). Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 923) = 809.98, p < 0.001, \eta^2 = 0.467$	$F(2.64, 2445.95) = 115.42, p < 0.001, \eta^2 = 0.111$	$F(2.75, 2538.25) = 502.9, p < 0.001, \eta^2 = 0.353$
Extinction	$F(1, 923) = 813.19, p < 0.001, \eta^2 = 0.468$	$F(2.58, 2335.19) = 450.24, p < 0.001, \eta^2 = 0.328$	$F(4.24, 3959.67) = 66.95, p < 0.001, \eta^2 = 0.068$
Extinction (Beg. vs. End)	$F(1, 923) = 876.22, p < 0.001, \eta^2 = 0.487$	$F(1, 923) = 751.45, p < 0.001, \eta^2 = 0.449$	$F(1, 923) = 151.1, p < 0.001, \eta^2 = 0.141$
Extinction Trials 1-2	$t(923) = 29.52, p < 0.001, \text{Cohen's } d = 0.997$	-	-
Extinction Trials 11-12	$t(923) = 22.03, p < 0.001, \text{Cohen's } d = 0.667$	-	-
Gen. to Morph	-	$t(923) = 13.34, p < 0.001, \text{Cohen's } d = 0.376$	-
Gen. to New	-	$t(923) = 28.07, p < 0.001, \text{Cohen's } d = 1.044$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(923) = 1.56, p = 0.119$, Cohen's $d = 0.031$	-
New trials 1-2	-	$t(923) = 9.96, p < 0.001$, Cohen's $d = 0.146$	-
Reinstatement	$F(1, 891) = 524.02, p < 0.001, \eta^2 = 0.37$	$F(1, 891) = 264.76, p < 0.001, \eta^2 = 0.229$	$F(1, 891) = 4.34, p = 0.0376, \eta^2 = 0.005$
Reextinction	$F(1, 923) = 460.42, p < 0.001, \eta^2 = 0.333$	$F(1.77, 1633.71) = 245.33, p < 0.001, \eta^2 = 0.21$	$F(2.64, 2436.72) = 5.93, p = 0.001, \eta^2 = 0.006$
Reextinction trial 4	$t(923) = 18.82, p < 0.001$, Cohen's $d = 0.507$	-	-

Table 4

Results of the main statistical analyses conducted for the startle response (EMG) levels across the whole sample (n = 893). Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 892) = 122.53, p < 0.001, \eta^2 = 0.121$	$F(4.59, 4103.2) = 42.87, p < 0.001, \eta^2 = 0.046$	$F(4.79, 4281.6) = 28.54, p < 0.001, \eta^2 = 0.031$
Extinction	$F(1, 892) = 310.41, p < 0.001, \eta^2 = 0.258$	$F(9.4, 8340.2) = 167.32, p < 0.001, \eta^2 = 0.158$	$F(10.42, 9321.4) = 1.08, p = 0.371, \eta^2 = 0.001$
Extinction (Beg. vs. End)	$F(1, 892) = 147.74, p < 0.001, \eta^2 = 0.142$	$F(1, 892) = 721.28, p < 0.001, \eta^2 = 0.447$	$F < 1$
Extinction Trials 1-2	$t(892) = 9.22, p < 0.001, \text{Cohen's } d = 0.341$	-	-
Extinction Trials 11-12	$t(892) = 9, p < 0.001, \text{Cohen's } d = 0.387$	-	-
Gen. to Morph	-	$t(892) = 8.9, p < 0.001, \text{Cohen's } d = 0.399$	-
Gen. to New	-	$t(892) = 17.47, p < 0.001, \text{Cohen's } d = 0.775$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(892) = 1.87, p = 0.062$, Cohen's $d = 0.079$	-
New trials 1-2	-	$t(892) = 8.03, p < 0.001$, Cohen's $d = 0.302$	-
Reinstatement	$F(1, 860) = 74.11, p < 0.001, \eta^2 = 0.079$	$F(1, 860) = 110.47, p < 0.001, \eta^2 = 0.114$	$F(1, 860) = 12.52, p < 0.001, \eta^2 = 0.014$
Reextinction	$F(1, 892) = 80.11, p < 0.001, \eta^2 = 0.082$	$F(2.87, 2568.96) = 117.11, p < 0.001, \eta^2 = 0.116$	$F < 1$
Reextinction trial 4	$t(892) = 3.92, p < 0.001$, Cohen's $d = 0.166$	-	-

Table 5

Results of the main statistical analyses conducted for the skin conductance responses (SCR) across the whole sample (n = 670). Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 669) = 111.3, p < 0.001, \eta^2 = 0.143$	$F(3.11, 2073.9) = 33.14, p < 0.001, \eta^2 = 0.047$	$F(4.04, 2709.45) = 24.39, p < 0.001, \eta^2 = 0.035$
Extinction	$F(1, 668) = 64.76, p < 0.001, \eta^2 = 0.088$	$F(8.38, 5584.48) = 2.46, p = 0.011, \eta^2 = 0.004$	$F(9.55, 6392.76) = 3.11, p = 0.001, \eta^2 = 0.005$
Extinction (Beg. vs. End)	$F(1, 669) = 38.66, p < 0.001, \eta^2 = 0.055$	$F(1, 669) = 1.62, p = 0.2042, \eta^2 = 0.002$	$F(1, 669) = 10.89, p = 0.001, \eta^2 = 0.016$
Extinction Trials 1-2	-	$t(669) = 7.52, p < 0.001, \text{Cohen's } d = 0.288$	-
Extinction Trials 11-12	-	$t(669) = 1.88, p = 0.06, \text{Cohen's } d = 0.079$	-
Gen. to Morph	-	$t(669) = 2.48, p = 0.013, \text{Cohen's } d = 0.126$	-
Gen. to New	-	$t(669) = 11.05, p < 0.001, \text{Cohen's } d = 0.561$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(669) = 3.66, p < 0.001$, Cohen's $d = 0.183$	-
New trials 1-2	-	$t(669) = 10.12, p < 0.001$, Cohen's $d = 0.432$	-
Reinstatement	$F(1, 646) = 19.11, p < 0.001, \eta^2 = 0.029$	$F < 1$	$F(1, 646) = 2.82, p = 0.0934, \eta^2 = 0.004$
Reextinction	$F(1, 669) = 2.86, p = 0.0914, \eta^2 = 0.004$	$F < 1$	$F(2.58, 1726.02) = 5.71, p = 0.001, \eta^2 = 0.008$
Reextinction trial 4	$t(669) = 4.43, p < 0.001$, Cohen's $d = 0.196$	-	-

Table 6

Results of the main statistical analyses conducted for the Distress levels for class A ‘Adaptive’ (n = 166) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 165) = 165.2, p < 0.001, \eta^2 = 0.5$	$F(3.52, 577.5) = 9.07, p < 0.001, \eta^2 = 0.052$	$F(3.32, 544.5) = 85.99, p < 0.001, \eta^2 = 0.343$
Extinction	$F(1, 165) = 183.33, p < 0.001, \eta^2 = 0.526$	$F(3.04, 508.2) = 117.48, p < 0.001, \eta^2 = 0.416$	$F(5.39, 889.35) = 19.58, p < 0.001, \eta^2 = 0.106$
Extinction (Beg. vs. End)	$F(1, 165) = 184.94, p < 0.001, \eta^2 = 0.528$	$F(1, 165) = 219.31, p < 0.001, \eta^2 = 0.571$	$F(1, 165) = 53.13, p < 0.001, \eta^2 = 0.244$
Extinction Trials 1-2	$t(165) = 13.63, p < 0.001, \text{Cohen's } d = 1.363$	-	-
Extinction Trials 11-12	$t(165) = 9.16, p < 0.001, \text{Cohen's } d = 0.856$	-	-
Gen. to Morph	-	$t(165) = 5.97, p < 0.001, \text{Cohen's } d = 0.529$	-
Gen. to New	-	$t(165) = 14.2, p < 0.001, \text{Cohen's } d = 1.644$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(165) = 1.09, p = 0.277$, Cohen's $d = 0.078$	-
New trials 1-2	-	$t(165) = 5.37, p < 0.001$, Cohen's $d = 0.254$	-
Reinstatement	$F(1, 160) = 104.53, p < 0.001, \eta^2 = 0.395$	$F(1, 160) = 62.22, p < 0.001, \eta^2 = 0.28$	$F < 1$
Reextinction	$F(1, 165) = 95.33, p < 0.001, \eta^2 = 0.366$	$F(1.92, 316.8) = 55.57, p < 0.001, \eta^2 = 0.252$	$F(2.51, 415.8) = 2.21, p = 0.097, \eta^2 = 0.013$
Reextinction trial 4	$t(165) = 9.5, p < 0.001$, Cohen's $d = 0.766$	-	-

Table 7

Results of the main statistical analyses conducted for the Distress levels for class B ‘Adaptive’ (n = 113) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 112) = 67.12, p < 0.001, \eta^2 = 0.375$	$F(3.33, 375.2) = 2.91, p = 0.029, \eta^2 = 0.025$	$F(3.51, 392) = 31.04, p < 0.001, \eta^2 = 0.217$
Extinction	$F(1, 112) = 81.56, p < 0.001, \eta^2 = 0.421$	$F(3.09, 344.96) = 72.09, p < 0.001, \eta^2 = 0.392$	$F(3.75, 418.88) = 10.38, p < 0.001, \eta^2 = 0.085$
Extinction (Beg. vs. End)	$F(1, 112) = 105.21, p < 0.001, \eta^2 = 0.484$	$F(1, 112) = 141.49, p < 0.001, \eta^2 = 0.558$	$F(1, 112) = 24.33, p < 0.001, \eta^2 = 0.178$
Extinction Trials 1-2	$t(112) = 9.59, p < 0.001, \text{Cohen's } d = 1.027$	-	-
Extinction Trials 11-12	$t(112) = 6.18, p < 0.001, \text{Cohen's } d = 0.619$	-	-
Gen. to Morph	-	$t(112) = 4.66, p < 0.001, \text{Cohen's } d = 0.495$	-
Gen. to New	-	$t(112) = 8.09, p < 0.001, \text{Cohen's } d = 1.048$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(112) = 0.24, p = 0.809$, Cohen's $d = 0.02$	-
New trials 1-2	-	$t(112) = 4.64, p < 0.001$, Cohen's $d = 0.259$	-
Reinstatement	$F(1, 106) = 37.92, p < 0.001, \eta^2 = 0.264$	$F(1, 106) = 24.52, p < 0.001, \eta^2 = 0.188$	$F < 1$
Reextinction	$F(1, 112) = 46.72, p < 0.001, \eta^2 = 0.294$	$F(2.25, 252) = 8.07, p < 0.001, \eta^2 = 0.067$	$F < 1$
Reextinction trial 4	$t(112) = 5.47, p < 0.001$, Cohen's $d = 0.434$	-	-

Table 8

Results of the main statistical analyses conducted for the Distress levels for class C ‘Adaptive’ (n = 136) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 135) = 208.87, p < 0.001, \eta^2 = 0.607$	$F(3.16, 425.25) = 33.85, p < 0.001, \eta^2 = 0.2$	$F(3.2, 432) = 126.04, p < 0.001, \eta^2 = 0.483$
Extinction	$F(1, 135) = 159.26, p < 0.001, \eta^2 = 0.541$	$F(2.42, 326.7) = 129.77, p < 0.001, \eta^2 = 0.49$	$F(3.94, 534.6) = 24.21, p < 0.001, \eta^2 = 0.152$
Extinction (Beg. vs. End)	$F(1, 135) = 175.82, p < 0.001, \eta^2 = 0.566$	$F(1, 135) = 219.35, p < 0.001, \eta^2 = 0.619$	$F(1, 135) = 53.56, p < 0.001, \eta^2 = 0.284$
Extinction Trials 1-2	$t(135) = 14.01, p < 0.001, \text{Cohen's } d = 1.522$	-	-
Extinction Trials 11-12	$t(135) = 8.83, p < 0.001, \text{Cohen's } d = 1.011$	-	-
Gen. to Morph	-	$t(135) = 6.4, p < 0.001, \text{Cohen's } d = 0.642$	-
Gen. to New	-	$t(135) = 17.33, p < 0.001, \text{Cohen's } d = 2.094$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(135) = 0.02, p = 0.982$, Cohen's $d = 0.002$	-
New trials 1-2	-	$t(135) = 4.93, p < 0.001$, Cohen's $d = 0.259$	-
Reinstatement	$F(1, 133) = 118.82, p < 0.001, \eta^2 = 0.472$	$F(1, 133) = 44.94, p < 0.001, \eta^2 = 0.253$	$F(1, 133) = 2.31, p = 0.1308, \eta^2 = 0.017$
Reextinction	$F(1, 135) = 88.95, p < 0.001, \eta^2 = 0.397$	$F(1.77, 238.95) = 52.34, p < 0.001, \eta^2 = 0.279$	$F(2.56, 344.25) = 10.32, p < 0.001, \eta^2 = 0.071$
Reextinction trial 4	$t(135) = 9.42, p < 0.001$, Cohen's $d = 0.826$	-	-

Table 9

Results of the main statistical analyses conducted for the Distress levels for class D ‘Adaptive’ (n = 220) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 219) = 456.23, p < 0.001, \eta^2 = 0.676$	$F(3.49, 766.5) = 130.13, p < 0.001, \eta^2 = 0.373$	$F(3.19, 700.8) = 257.88, p < 0.001, \eta^2 = 0.541$
Extinction	$F(1, 219) = 583.2, p < 0.001, \eta^2 = 0.727$	$F(3.1, 674.52) = 164.25, p < 0.001, \eta^2 = 0.429$	$F(3.48, 770.88) = 21.37, p < 0.001, \eta^2 = 0.089$
Extinction (Beg. vs. End)	$F(1, 219) = 584.14, p < 0.001, \eta^2 = 0.727$	$F(1, 219) = 317.07, p < 0.001, \eta^2 = 0.591$	$F(1, 219) = 37.58, p < 0.001, \eta^2 = 0.146$
Extinction Trials 1-2	$t(219) = 23.7, p < 0.001, \text{Cohen's } d = 2.178$	-	-
Extinction Trials 11-12	$t(219) = 15.72, p < 0.001, \text{Cohen's } d = 1.467$	-	-
Gen. to Morph	-	$t(219) = 7.77, p < 0.001, \text{Cohen's } d = 0.652$	-
Gen. to New	-	$t(219) = 19.43, p < 0.001, \text{Cohen's } d = 1.841$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(219) = 0.36, p = 0.719, \text{Cohen's } d = 0.021$	-
New trials 1-2	-	$t(219) = 5.43, p < 0.001, \text{Cohen's } d = 0.211$	-
Reinstatement	$F(1, 215) = 266.06, p < 0.001, \eta^2 = 0.553$	$F(1, 215) = 85.58, p < 0.001, \eta^2 = 0.285$	$F(1, 215) = 2.89, p = 0.0906, \eta^2 = 0.013$
Reextinction	$F(1, 219) = 251.02, p < 0.001, \eta^2 = 0.534$	$F(1.73, 381.06) = 98.42, p < 0.001, \eta^2 = 0.31$	$F < 1$
Reextinction trial 4	$t(219) = 13.65, p < 0.001, \text{Cohen's } d = 1.144$	-	-

Table 10

Results of the main statistical analyses conducted for the Distress levels for class E ‘Maladaptive’ (n = 117) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 116) = 62.17, p < 0.001, \eta^2 = 0.349$	$F(3.47, 400.2) = 92.53, p < 0.001, \eta^2 = 0.444$	$F(3.69, 429.2) = 26.92, p < 0.001, \eta^2 = 0.188$
Extinction	$F(1, 116) = 67.99, p < 0.001, \eta^2 = 0.37$	$F(2.69, 306.24) = 23.74, p < 0.001, \eta^2 = 0.17$	$F(4.96, 574.2) = 1.25, p = 0.284, \eta^2 = 0.011$
Extinction (Beg. vs. End)	$F(1, 116) = 69.03, p < 0.001, \eta^2 = 0.373$	$F(1, 116) = 37.44, p < 0.001, \eta^2 = 0.244$	$F < 1$
Extinction Trials 1-2	$t(116) = 6.83, p < 0.001, \text{Cohen's } d = 0.736$	-	-
Extinction Trials 11-12	$t(116) = 7.65, p < 0.001, \text{Cohen's } d = 0.77$	-	-
Gen. to Morph	-	$t(116) = 5.98, p < 0.001, \text{Cohen's } d = 0.571$	-
Gen. to New	-	$t(116) = 7.63, p < 0.001, \text{Cohen's } d = 0.962$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(116) = 0.47, p = 0.639$, Cohen's $d = 0.031$	-
New trials 1-2	-	$t(116) = 1.5, p = 0.136$, Cohen's $d = 0.106$	-
Reinstatement	$F(1, 108) = 36.64, p < 0.001, \eta^2 = 0.253$	$F(1, 108) = 22.46, p < 0.001, \eta^2 = 0.172$	$F < 1$
Reextinction	$F(1, 116) = 33.02, p < 0.001, \eta^2 = 0.222$	$F(1.97, 229.68) = 23.85, p < 0.001, \eta^2 = 0.171$	$F(2.41, 278.4) = 2.82, p = 0.051, \eta^2 = 0.024$
Reextinction trial 4	$t(116) = 5.34, p < 0.001$, Cohen's $d = 0.522$	-	-

Table 11

Results of the main statistical analyses conducted for the Distress levels for class F ‘Maladaptive’ (n = 110) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 109) = 93.62, p < 0.001, \eta^2 = 0.462$	$F(3.25, 354.25) = 176.62, p < 0.001, \eta^2 = 0.618$	$F(2.52, 272.5) = 63.73, p < 0.001, \eta^2 = 0.369$
Extinction	$F(1, 109) = 117.16, p < 0.001, \eta^2 = 0.518$	$F(2.69, 287.76) = 24.24, p < 0.001, \eta^2 = 0.182$	$F(5.4, 587.51) = 3.27, p = 0.005, \eta^2 = 0.029$
Extinction (Beg. vs. End)	$F(1, 109) = 139.48, p < 0.001, \eta^2 = 0.561$	$F(1, 109) = 34.95, p < 0.001, \eta^2 = 0.243$	$F(1, 109) = 9.79, p = 0.0023, \eta^2 = 0.082$
Extinction Trials 1-2	$t(109) = 11.31, p < 0.001, \text{Cohen's } d = 1.39$	-	-
Extinction Trials 11-12	$t(109) = 9.91, p < 0.001, \text{Cohen's } d = 0.977$	-	-
Gen. to Morph	-	$t(109) = 2.76, p = 0.007, \text{Cohen's } d = 0.263$	-
Gen. to New	-	$t(109) = 6.5, p < 0.001, \text{Cohen's } d = 0.849$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(109) = 1.9, p = 0.06$, Cohen's $d = 0.143$	-
New trials 1-2	-	$t(109) = 2.24, p = 0.027$, Cohen's $d = 0.15$	-
Reinstatement	$F(1, 105) = 89.74, p < 0.001, \eta^2 = 0.461$	$F(1, 105) = 43.88, p < 0.001, \eta^2 = 0.295$	$F(1, 105) = 1.32, p = 0.2529, \eta^2 = 0.012$
Reextinction	$F(1, 109) = 61.51, p < 0.001, \eta^2 = 0.361$	$F(1.72, 186.39) = 26.69, p < 0.001, \eta^2 = 0.197$	$F < 1$
Reextinction trial 4	$t(109) = 7.84, p < 0.001$, Cohen's $d = 0.741$	-	-

Table 12

Results of the main statistical analyses conducted for the Distress levels for class G ‘Limited responders’ (n = 62) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 61) = 13.96, p < 0.001, \eta^2 = 0.186$	$F(3.25, 198.25) = 13.62, p < 0.001, \eta^2 = 0.183$	$F(2.38, 146.4) = 7.07, p = 0.001, \eta^2 = 0.104$
Extinction	$F(1, 61) = 13.71, p < 0.001, \eta^2 = 0.184$	$F(3.16, 194.59) = 9.64, p < 0.001, \eta^2 = 0.136$	$F(4.65, 281.82) = 2.73, p = 0.023, \eta^2 = 0.043$
Extinction (Beg. vs. End)	$F(1, 61) = 19.86, p < 0.001, \eta^2 = 0.246$	$F(1, 61) = 25.83, p < 0.001, \eta^2 = 0.297$	$F(1, 61) = 6.45, p = 0.0137, \eta^2 = 0.096$
Extinction Trials 1-2	$t(61) = 4.5, p < 0.001, \text{Cohen's } d = 0.589$	-	-
Extinction Trials 11-12	$t(61) = 2.9, p = 0.005, \text{Cohen's } d = 0.358$	-	-
Gen. to Morph	-	$t(61) = 2.24, p = 0.029, \text{Cohen's } d = 0.36$	-
Gen. to New	-	$t(61) = 4.44, p < 0.001, \text{Cohen's } d = 0.689$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(61) = 0.15, p = 0.883, \text{Cohen's } d = 0.023$	-
New trials 1-2	-	$t(61) = 1.8, p = 0.077, \text{Cohen's } d = 0.127$	-
Reinstatement	$F(1, 58) = 2, p = 0.1629, \eta^2 = 0.033$	$F(1, 58) = 6.58, p = 0.0129, \eta^2 = 0.102$	$F < 1$
Reextinction	$F < 1$	$F(1.75, 106.14) = 6.65, p = 0.003, \eta^2 = 0.098$	$F < 1$
Reextinction trial 4	$t(61) = 1.01, p = 0.316, \text{Cohen's } d = 0.126$	-	-

Table 13

Personality profiles for the 7 Distress classes separately. Means, medians, standard deviations (SD), minimum (Min), and maximum (Max) value (T-scores) on the Harmavoidance (HA), Stress Reaction (SR) and Wellbeing (WB) scales. (continued below)

#	HA		WB	HA		WB	HA SD
	Mean	SR Mean	Mean	Median	SR Median	Median	
1	42.6	50.91	50.4	42	51	51	9.463
2	43.69	52.06	49.99	42	51	51	8.901
3	44.74	53.51	50.08	45	55	51	9.066
4	45.09	53.55	50.7	45	54	51	9.909
5	45.2	52.86	48.72	45	54	47	8.985
6	42.94	50.06	48.89	42	51	47	8.678
7	46.71	52.72	48.41	45	54	51	10.63

	WB			WB	HA	WB		
SR SD	SD	HA Min	SR Min	Min	Max	SR Max	Max	N
10.15	9.966	25	34	19	65	73	65	113
9.526	10.19	25	34	19	65	73	65	166
10.33	10.18	25	34	19	65	73	65	136
10.1	10.42	19	34	19	65	73	65	220
10.53	9.489	19	34	27	65	73	65	117
9.761	10.99	25	34	27	65	68	65	62
9.777	10.77	25	34	19	65	73	65	110

Table 15

Comparing the 7 Distress classes on their level of Stress Reaction.

Effect	DFn	DFd	SSn	SSd	F	p	p<.05	ges
class	6	917	1087	92339	1.8	0.09617		0.01164

Table 16

Comparing the 7 Distress classes on their level of Wellbeing.

Effect	DFn	DFd	SSn	SSd	F	p	p<.05	ges
class	6	917	635.3	96485	1.006	0.4197		0.006541

Table 17

Comparing the 7 Distress classes on their level of Harmavoidance.

Effect	DFn	DFd	SSn	SSd	F	p	p<.05	ges
class	6	917	1343	81977	2.503	0.02082	*	0.01611

Table 18

Results of the main statistical analyses conducted for the startle response (EMG) levels for class A ‘Adaptive’ (n = 179) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 178) = 45.03, p < 0.001, \eta^2 = 0.202$	$F(4.34, 774.3) = 9.28, p < 0.001, \eta^2 = 0.05$	$F(4.84, 863.3) = 8.75, p < 0.001, \eta^2 = 0.047$
Extinction	$F(1, 178) = 144.8, p < 0.001, \eta^2 = 0.449$	$F(9.38, 1664.3) = 57.89, p < 0.001, \eta^2 = 0.245$	$F(9.57, 1703.46) = 1.12, p = 0.344, \eta^2 = 0.006$
Extinction (Beg. vs. End)	$F(1, 178) = 63.52, p < 0.001, \eta^2 = 0.263$	$F(1, 178) = 305.96, p < 0.001, \eta^2 = 0.632$	$F(1, 178) = 1.68, p = 0.1963, \eta^2 = 0.009$
Extinction Trials 1-2	$t(178) = 5.89, p < 0.001, \text{Cohen's } d = 0.568$	-	-
Extinction Trials 11-12	$t(178) = 5.68, p < 0.001, \text{Cohen's } d = 0.523$	-	-
Gen. to Morph	-	$t(178) = 6.3, p < 0.001, \text{Cohen's } d = 0.601$	-
Gen. to New	-	$t(178) = 11.39, p < 0.001, \text{Cohen's } d = 1.081$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(178) = 1.13, p = 0.259$, Cohen's $d = 0.111$	-
New trials 1-2	-	$t(178) = 3.74, p < 0.001$, Cohen's $d = 0.348$	-
Reinstatement	$F(1, 175) = 22.1, p < 0.001, \eta^2 = 0.112$	$F(1, 175) = 26.79, p < 0.001, \eta^2 = 0.133$	$F(1, 175) = 8.76, p = 0.0035, \eta^2 = 0.048$
Reextinction	$F(1, 178) = 15.51, p < 0.001, \eta^2 = 0.08$	$F(2.84, 507.3) = 25.59, p < 0.001, \eta^2 = 0.126$	$F(2.77, 491.28) = 1.73, p = 0.164, \eta^2 = 0.01$
Reextinction trial 4	$t(178) = 1.55, p = 0.124$, Cohen's $d = 0.144$	-	-

Table 19

Results of the main statistical analyses conducted for the startle response (EMG) levels for class B ‘Adaptive’ (n = 271) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 270) = 15.63, p < 0.001, \eta^2 = 0.055$	$F(4.72, 1269) = 10, p < 0.001, \eta^2 = 0.036$	$F(4.89, 1323) = 4.32, p = 0.001, \eta^2 = 0.016$
Extinction	$F(1, 270) = 55.45, p < 0.001, \eta^2 = 0.17$	$F(10.28, 2762.1) = 46.18, p < 0.001, \eta^2 = 0.146$	$F(10.33, 2791.8) = 1.42, p = 0.161, \eta^2 = 0.005$
Extinction (Beg. vs. End)	$F(1, 270) = 18.58, p < 0.001, \eta^2 = 0.064$	$F(1, 270) = 284.67, p < 0.001, \eta^2 = 0.513$	$F(1, 270) = 2.09, p = 0.1493, \eta^2 = 0.008$
Extinction Trials 1-2	$t(270) = 2, p = 0.047, \text{Cohen's } d = 0.164$	-	-
Extinction Trials 11-12	$t(270) = 4.53, p < 0.001, \text{Cohen's } d = 0.348$	-	-
Gen. to Morph	-	$t(270) = 3.35, p = 0.001, \text{Cohen's } d = 0.273$	-
Gen. to New	-	$t(270) = 8.57, p < 0.001, \text{Cohen's } d = 0.726$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(270) = 0.86, p = 0.391, \text{Cohen's } d = 0.07$	-
New trials 1-2	-	$t(270) = 4.48, p < 0.001, \text{Cohen's } d = 0.355$	-
Reinstatement	$F(1, 264) = 11.03, p = 0.001, \eta^2 = 0.04$	$F(1, 264) = 48.16, p < 0.001, \eta^2 = 0.154$	$F < 1$
Reextinction	$F(1, 270) = 11.28, p < 0.001, \eta^2 = 0.04$	$F(2.96, 801.9) = 27.62, p < 0.001, \eta^2 = 0.093$	$F < 1$
Reextinction trial 4	$t(270) = 1.36, p = 0.174, \text{Cohen's } d = 0.117$	-	-

Table 20

Results of the main statistical analyses conducted for the startle response (EMG) levels for class C ‘Intermediate maladaptive’ (n = 277) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 276) = 41.91, p < 0.001, \eta^2 = 0.132$	$F(4.84, 1338.6) = 18.46, p < 0.001, \eta^2 = 0.063$	$F(4.92, 1352.4) = 12.62, p < 0.001, \eta^2 = 0.044$
Extinction	$F(1, 276) = 150.89, p < 0.001, \eta^2 = 0.353$	$F(10.15, 2793.12) = 69.36, p < 0.001, \eta^2 = 0.201$	$F < 1$
Extinction (Beg. vs. End)	$F(1, 276) = 60.17, p < 0.001, \eta^2 = 0.179$	$F(1, 276) = 370.44, p < 0.001, \eta^2 = 0.573$	$F < 1$
Extinction Trials 1-2	$t(276) = 5.55, p < 0.001, \text{Cohen's } d = 0.442$	-	-
Extinction Trials 11-12	$t(276) = 5.72, p < 0.001, \text{Cohen's } d = 0.399$	-	-
Gen. to Morph	-	$t(276) = 4.84, p < 0.001, \text{Cohen's } d = 0.384$	-
Gen. to New	-	$t(276) = 9.72, p < 0.001, \text{Cohen's } d = 0.814$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(276) = 1.39, p = 0.166$, Cohen's $d = 0.112$	-
New trials 1-2	-	$t(276) = 4.46, p < 0.001$, Cohen's $d = 0.339$	-
Reinstatement	$F(1, 261) = 36.98, p < 0.001, \eta^2 = 0.124$	$F(1, 261) = 73.45, p < 0.001, \eta^2 = 0.22$	$F(1, 261) = 1.41, p = 0.2363, \eta^2 = 0.005$
Reextinction	$F(1, 276) = 52.51, p < 0.001, \eta^2 = 0.16$	$F(2.93, 811.44) = 49.45, p < 0.001, \eta^2 = 0.152$	$F < 1$
Reextinction trial 4	$t(276) = 3.29, p = 0.001$, Cohen's $d = 0.257$	-	-

Table 21

Results of the main statistical analyses conducted for the startle response (EMG) levels for class D ‘Intermediate maladaptive’ (n = 54) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 53) = 30.9, p < 0.001, \eta^2 = 0.368$	$F(4.09, 217.3) = 8.11, p < 0.001, \eta^2 = 0.133$	$F(3.94, 209.35) = 5.18, p = 0.001, \eta^2 = 0.089$
Extinction	$F(1, 53) = 43.37, p < 0.001, \eta^2 = 0.45$	$F(7.65, 408.1) = 12.68, p < 0.001, \eta^2 = 0.193$	$F(8.12, 431.42) = 1.22, p = 0.283, \eta^2 = 0.023$
Extinction (Beg. vs. End)	$F(1, 53) = 20.34, p < 0.001, \eta^2 = 0.277$	$F(1, 53) = 52.31, p < 0.001, \eta^2 = 0.497$	$F < 1$
Extinction Trials 1-2	$t(53) = 4.7, p < 0.001, \text{Cohen's } d = 0.797$	-	-
Extinction Trials 11-12	$t(53) = 2.52, p = 0.015, \text{Cohen's } d = 0.504$	-	-
Gen. to Morph	-	$t(53) = 3.18, p = 0.002, \text{Cohen's } d = 0.609$	-
Gen. to New	-	$t(53) = 6.57, p < 0.001, \text{Cohen's } d = 1.079$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(53) = 0.11, p = 0.913$, Cohen's $d = 0.019$	-
New trials 1-2	-	$t(53) = 2.96, p = 0.005$, Cohen's $d = 0.379$	-
Reinstatement	$F(1, 51) = 8.07, p = 0.0065, \eta^2 = 0.137$	$F < 1$	$F(1, 51) = 2.97, p = 0.0908, \eta^2 = 0.055$
Reextinction	$F(1, 53) = 9.47, p = 0.0033, \eta^2 = 0.152$	$F(2.66, 141.51) = 16.06, p < 0.001, \eta^2 = 0.233$	$F < 1$
Reextinction trial 4	$t(53) = 1.29, p = 0.202$, Cohen's $d = 0.236$	-	-

Table 22

Results of the main statistical analyses conducted for the startle response (EMG) levels for class E ‘Limited responders’ (n = 112) . Each row refers to the different experimental phases. Each column refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 111) = 6.4, p = 0.0128, \eta^2 = 0.054$	$F(4.73, 527.25) = 4.3, p = 0.001, \eta^2 = 0.037$	$F(4.83, 538.35) = 2.02, p = 0.077, \eta^2 = 0.018$
Extinction	$F(1, 111) = 21.27, p < 0.001, \eta^2 = 0.161$	$F(9.97, 1111.11) = 8.61, p < 0.001, \eta^2 = 0.072$	$F < 1$
Extinction (Beg. vs. End)	$F(1, 111) = 10.05, p = 0.002, \eta^2 = 0.083$	$F(1, 111) = 45.74, p < 0.001, \eta^2 = 0.292$	$F(1, 111) = 1.21, p = 0.2734, \eta^2 = 0.011$
Extinction Trials 1-2	$t(111) = 1.68, p = 0.096, \text{Cohen's } d = 0.205$	-	-
Extinction Trials 11-12	$t(111) = 3, p = 0.003, \text{Cohen's } d = 0.388$	-	-
Gen. to Morph	-	$t(111) = 2.16, p = 0.033, \text{Cohen's } d = 0.281$	-
Gen. to New	-	$t(111) = 3.65, p < 0.001, \text{Cohen's } d = 0.526$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(111) = 0.82, p = 0.413, \text{Cohen's } d = 0.106$	-
New trials 1-2	-	$t(111) = 2.46, p = 0.015, \text{Cohen's } d = 0.322$	-
Reinstatement	$F(1, 105) = 4.49, p = 0.0364, \eta^2 = 0.041$	$F(1, 105) = 9.98, p = 0.0021, \eta^2 = 0.087$	$F(1, 105) = 2.44, p = 0.1216, \eta^2 = 0.023$
Reextinction	$F(1, 111) = 1.71, p = 0.1943, \eta^2 = 0.015$	$F(2.89, 319.68) = 7.23, p < 0.001, \eta^2 = 0.061$	$F < 1$
Reextinction trial 4	$t(111) = 1.16, p = 0.249, \text{Cohen's } d = 0.153$	-	-

Table 23

Results of the main statistical analyses conducted for the skin conductance response (SCR) levels for class A ‘Adaptive’ (n = 182) . Each row refers to the different experimental phases. Each row refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 181) = 91.8, p < 0.001, \eta^2 = 0.337$	$F(4.66, 841.65) = 19.83, p < 0.001, \eta^2 = 0.099$	$F(4.7, 850.7) = 13.77, p < 0.001, \eta^2 = 0.071$
Extinction	$F(1, 180) = 40.5, p < 0.001, \eta^2 = 0.184$	$F(9.04, 1623.6) = 1.87, p = 0.052, \eta^2 = 0.01$	$F(8.97, 1623.6) = 2.19, p = 0.021, \eta^2 = 0.012$
Extinction (Beg. vs. End)	$F(1, 181) = 22.67, p < 0.001, \eta^2 = 0.111$	$F < 1$	$F(1, 181) = 10.14, p = 0.0017, \eta^2 = 0.053$
Extinction Trials 1-2	$t(181) = 6.46, p < 0.001, \text{Cohen's } d = 0.633$	-	-
Extinction Trials 11-12	$t(181) = 0.97, p = 0.331, \text{Cohen's } d = 0.087$	-	-
Gen. to Morph	-	$t(181) = 1.31, p = 0.19, \text{Cohen's } d = 0.146$	-
Gen. to New	-	$t(181) = 7.48, p < 0.001, \text{Cohen's } d = 0.812$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(181) = 2.29, p = 0.023$, Cohen's $d = 0.236$	-
New trials 1-2	-	$t(181) = 6.59, p < 0.001$, Cohen's $d = 0.62$	-
Reinstatement	$F(1, 176) = 8.91, p = 0.0032, \eta^2 = 0.048$	$F(1, 176) = 1.68, p = 0.1964, \eta^2 = 0.009$	$F(1, 176) = 4.79, p = 0.0299, \eta^2 = 0.026$
Reextinction	$F(1, 181) = 1.09, p = 0.2973, \eta^2 = 0.006$	$F(2.94, 532.14) = 2.29, p = 0.078, \eta^2 = 0.013$	$F(2.76, 499.56) = 6.72, p < 0.001, \eta^2 = 0.036$
Reextinction trial 4	$t(181) = 3.86, p < 0.001$, Cohen's $d = 0.361$	-	-

Table 24

Results of the main statistical analyses conducted for the skin conductance response (SCR) levels for class B ‘Adaptive’ (n = 251) . Each row refers to the different experimental phases. Each row refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 250) = 184.84, p < 0.001, \eta^2 = 0.425$	$F(4.29, 1075) = 39.81, p < 0.001, \eta^2 = 0.137$	$F(4.51, 1125) = 19.25, p < 0.001, \eta^2 = 0.071$
Extinction	$F(1, 250) = 69.58, p < 0.001, \eta^2 = 0.218$	$F(9.68, 2420) = 6.31, p < 0.001, \eta^2 = 0.025$	$F(10.19, 2557.5) = 3.52, p < 0.001, \eta^2 = 0.014$
Extinction (Beg. vs. End)	$F(1, 250) = 51.16, p < 0.001, \eta^2 = 0.17$	$F(1, 250) = 16.89, p < 0.001, \eta^2 = 0.063$	$F(1, 250) = 10.53, p = 0.0013, \eta^2 = 0.04$
Extinction Trials 1-2	$t(250) = 7.41, p < 0.001, \text{Cohen's } d = 0.611$	-	-
Extinction Trials 11-12	$t(250) = 2.76, p = 0.006, \text{Cohen's } d = 0.231$	-	-
Gen. to Morph	-	$t(250) = 2.73, p = 0.007, \text{Cohen's } d = 0.25$	-
Gen. to New	-	$t(250) = 11.26, p < 0.001, \text{Cohen's } d = 0.979$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(250) = 1.45, p = 0.148$, Cohen's $d = 0.129$	-
New trials 1-2	-	$t(250) = 9.51, p < 0.001$, Cohen's $d = 0.737$	-
Reinstatement	$F(1, 242) = 1.79, p = 0.1818, \eta^2 = 0.007$	$F < 1$	$F < 1$
Reextinction	$F(1, 250) = 1.03, p = 0.3122, \eta^2 = 0.004$	$F(2.8, 697.5) = 1.19, p = 0.312, \eta^2 = 0.005$	$F < 1$
Reextinction trial 4	$t(250) = 0.91, p = 0.363$, Cohen's $d = 0.073$	-	-

Table 25

Results of the main statistical analyses conducted for the skin conductance response (SCR) levels for class C ‘Intermediate’ (n = 61) . Each row refers to the different experimental phases. Each row refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 60) = 5.45, p = 0.0229, \eta^2 = 0.083$	$F(2.29, 138) = 2.13, p = 0.115, \eta^2 = 0.034$	$F(3.06, 183) = 3.3, p = 0.021, \eta^2 = 0.052$
Extinction	$F(1, 60) = 10.61, p = 0.0019, \eta^2 = 0.15$	$F(6.78, 409.2) = 1.04, p = 0.403, \eta^2 = 0.017$	$F < 1$
Extinction (Beg. vs. End)	$F(1, 60) = 2.76, p = 0.1016, \eta^2 = 0.044$	$F < 1$	$F < 1$
Extinction Trials 1-2	$t(60) = 1.68, p = 0.098, \text{Cohen's } d = 0.233$	-	-
Extinction Trials 11-12	$t(60) = 0.78, p = 0.441, \text{Cohen's } d = 0.126$	-	-
Gen. to Morph	-	$t(60) = 1.12, p = 0.267, \text{Cohen's } d = 0.199$	-
Gen. to New	-	$t(60) = 4.66, p < 0.001, \text{Cohen's } d = 0.878$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(60) = 2.51, p = 0.015$, Cohen's $d = 0.44$	-
New trials 1-2	-	$t(60) = 4.51, p < 0.001$, Cohen's $d = 0.68$	-
Reinstatement	$F(1, 59) = 9.32, p = 0.0034, \eta^2 = 0.136$	$F < 1$	$F < 1$
Reextinction	$F(1, 60) = 1.12, p = 0.2951, \eta^2 = 0.018$	$F < 1$	$F < 1$
Reextinction trial 4	$t(60) = 2.42, p = 0.019$, Cohen's $d = 0.37$	-	-

Table 26

Results of the main statistical analyses conducted for the skin conductance response (SCR) levels for class D ‘Limited responding’ (n = 176) . Each row refers to the different experimental phases. Each row refers to the main and interactions effects of the repeated measures ANOVAs. In case of t-tests, the results are included on a single column.

Phase	CS effect	Trial effect	CS x Trial
Acquisition	$F(1, 175) = 182.36, p < 0.001, \eta^2 = 0.51$	$F(4.53, 796.25) = 26.71, p < 0.001, \eta^2 = 0.132$	$F(4.08, 717.5) = 8.8, p < 0.001, \eta^2 = 0.048$
Extinction	$F(1, 175) = 42.58, p < 0.001, \eta^2 = 0.196$	$F(8.72, 1520.75) = 6.86, p < 0.001, \eta^2 = 0.038$	$F(9.14, 1597.75) = 3.88, p < 0.001, \eta^2 = 0.022$
Extinction (Beg. vs. End)	$F(1, 175) = 28.07, p < 0.001, \eta^2 = 0.138$	$F(1, 175) = 17.17, p < 0.001, \eta^2 = 0.089$	$F(1, 175) = 20.86, p < 0.001, \eta^2 = 0.106$
Extinction Trials 1-2	$t(175) = 5.87, p < 0.001, \text{Cohen's } d = 0.611$	-	-
Extinction Trials 11-12	$t(175) = 1.03, p = 0.305, \text{Cohen's } d = 0.1$	-	-
Gen. to Morph	-	$t(175) = 1.15, p = 0.252, \text{Cohen's } d = 0.121$	-
Gen. to New	-	$t(175) = 6.6, p < 0.001, \text{Cohen's } d = 0.699$	-

Phase	CS effect	Trial effect	CS \times Trial
Morph trials 1-2	-	$t(175) = 0.61, p = 0.545$, Cohen's $d = 0.064$	-
New trials 1-2	-	$t(175) = 6.19, p < 0.001$, Cohen's $d = 0.665$	-
Reinstatement	$F < 1$	$F < 1$	$F < 1$
Reextinction	$F < 1$	$F < 1$	$F < 1$
Reextinction trial 4	$t(175) = 0.4, p = 0.687$, Cohen's $d = 0.042$	-	-

Table 27

Model Solutions

Distress		
Number of classes	AIC	BIC
1	525705.1	525722.7
2	513967.5	514011.4
3	504894.5	504964.7
4	500850.6	500947.2
5	498467.8	498590.7
6	496572.2	496721.4
7	495681.2	495856.8

EMG		
Number of classes	AIC	BIC
1	151228.0	151246.2
2	132955.4	133000.9
3	128441.3	128514.2
4	126576.3	126676.5
5	125749.7	125877.3

SCR		
Number of classes	AIC	BIC
1	83170.90	83187.74
2	49205.36	49247.45
3	41215.05	41282.39
4	37509.44	37602.04

Table 28

Post Hoc Comparisons - class for the harm avoidance differences between classes identified based on distress ratings. 1: Adaptive (N = 133), 2: Adaptive (N = 166), 3: Adaptive (N = 136), 4: Adaptive (N = 220), 5: Maladaptive (N = 117), 6: Limited responders (N = 62), 7: Maladaptive (N = 110).

		Mean Difference	SE	t	P _{tukey}	P _{scheffe}	P _{bonf}	P _{holm}	P _{sidak}
1	2	-1.091	1.153	-0.946	0.965	0.989	1.000	1.000	1.000
	3	-2.141	1.204	-1.779	0.563	0.788	1.000	1.000	0.808
	4	-2.485	1.094	-2.271	0.260	0.524	0.492	0.421	0.392
	5	-2.595	1.247	-2.081	0.365	0.632	0.792	0.642	0.554
	6	-0.334	1.494	-0.223	1.000	1.000	1.000	1.000	1.000
	7	-4.107	1.266	-3.243	0.021	0.106	0.026	0.026	0.025
2	3	-1.050	1.094	-0.960	0.962	0.988	1.000	1.000	1.000
	4	-1.394	0.972	-1.434	0.783	0.914	1.000	1.000	0.969
	5	-1.504	1.141	-1.318	0.844	0.942	1.000	1.000	0.987
	6	0.757	1.407	0.538	0.998	1.000	1.000	1.000	1.000
	7	-3.016	1.162	-2.595	0.129	0.347	0.202	0.192	0.184
3	4	-0.344	1.031	-0.333	1.000	1.000	1.000	1.000	1.000
	5	-0.454	1.192	-0.381	1.000	1.000	1.000	1.000	1.000
	6	1.807	1.449	1.247	0.875	0.956	1.000	1.000	0.993
	7	-1.966	1.212	-1.622	0.668	0.853	1.000	1.000	0.903
4	5	-0.110	1.082	-0.102	1.000	1.000	1.000	1.000	1.000
	6	2.151	1.359	1.582	0.694	0.868	1.000	1.000	0.921
	7	-1.623	1.104	-1.470	0.763	0.904	1.000	1.000	0.960
5	6	2.261	1.485	1.522	0.731	0.888	1.000	1.000	0.944
	7	-1.513	1.256	-1.205	0.893	0.963	1.000	1.000	0.996
6	7	-3.774	1.502	-2.513	0.156	0.390	0.255	0.231	0.226

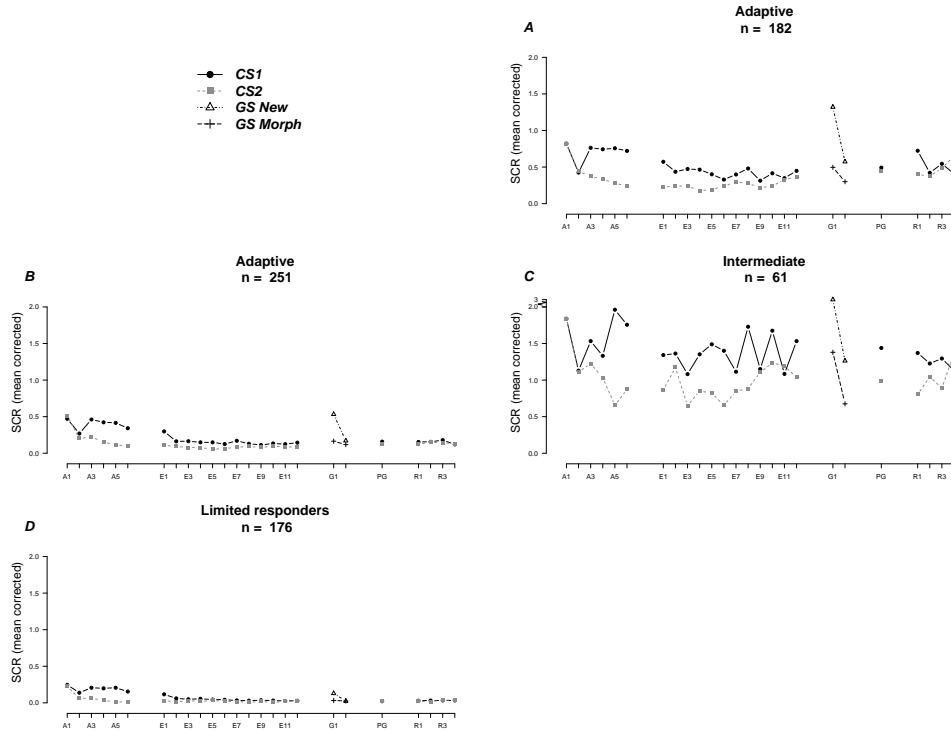


Figure 1. Trajectories of Skin Conductance Responding (SCR) ($N = 670$). Each plot represents the latent populations of skin conductance responses identified using Latent Class Growth Modeling. On the x-axis each point represents a trial. Phases: A = Acquisition (1-6); E = Extinction (1-12); G = Generalization (1-2); PG = Post-generalization; R = Re-extinction (1-4). Note that Re-extinction follows Reinstatement of fear, tested following three unsignaled electrical stimuli (UCSs). On the y-axis, the SCR data were presented (in mS, mean-corrected). CS1 = threat stimulus followed by an electrical stimulus (UCS) during acquisition; CS2 = safety stimulus, never followed by an electrical stimulus; GS morph = stimulus created by morphing the CS1 and CS2; GS new = novel male neutral face stimulus.