

Supplementary Table 1

Mean, SD, observed correlations, and Cronbach's α (on the diagonal in bold) of all scales in Study 1

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1 D	1.97	0.50	.85																							
2 CRU	1.93	0.50	.58	.87																						
3 EGO	2.45	0.60	.49	.52	.83																					
4 ENT	2.67	0.66	.38	.35	.48	.87																				
5 FRU	2.42	0.48	.61	.54	.63	.41	.72																			
6 GRE	2.30	0.79	.41	.36	.40	.47	.43	.86																		
7 MAC	2.92	0.65	.51	.42	.49	.49	.53	.50	.82																	
8 MOR	1.94	0.56	.52	.52	.56	.41	.56	.37	.47	.78																
9 NAR	2.10	0.71	.39	.29	.33	.51	.33	.49	.54	.39	.81															
10 PSY	2.01	0.58	.60	.40	.43	.33	.51	.44	.58	.45	.49	.74														
11 SAD	1.43	0.47	.47	.34	.31	.17	.40	.32	.34	.36	.35	.57	.84													
12 SEL	2.34	0.73	.55	.63	.52	.43	.54	.36	.50	.50	.37	.50	.35	.69												
13 SPI	1.75	0.48	.58	.51	.57	.40	.62	.37	.43	.60	.36	.49	.44	.49	.88											
14 ATT	1.71	0.59	.17	.04	.13	.32	.13	.24	.21	.21	.48	.25	.10	.13	.19	.82										
15 CAL	1.31	0.46	.58	.54	.39	.26	.40	.34	.35	.36	.31	.49	.42	.51	.41	.13	.84									
16 DEC	1.41	0.51	.50	.32	.35	.25	.41	.39	.44	.45	.42	.52	.37	.38	.40	.37	.53	.82								
17 GRA	1.51	0.51	.43	.29	.31	.50	.32	.40	.45	.37	.53	.38	.25	.32	.34	.45	.44	.50	.77							
18 HOS	1.69	0.59	.36	.24	.33	.15	.34	.33	.28	.22	.25	.39	.37	.29	.35	.13	.40	.44	.29	.80						
19 IRR	1.31	0.39	.33	.23	.29	.13	.22	.26	.20	.33	.29	.37	.34	.23	.29	.25	.42	.56	.36	.35	.61					
20 MAN	1.63	0.49	.41	.21	.24	.26	.28	.34	.45	.35	.48	.47	.31	.30	.29	.47	.42	.70	.55	.34	.42	.70				
21 SUS	1.72	0.55	.36	.33	.43	.30	.42	.34	.34	.28	.29	.31	.28	.28	.39	.18	.41	.36	.41	.51	.29	.27	.72			
22 PD	2.24	0.72	.22	.23	.36	.12	.24	.28	.22	.22	.22	.27	.29	.21	.33	.07	.25	.29	.16	.55	.34	.16	.49	.89		
23 IPD	2.31	0.91	.11	.11	.28	.06	.17	.23	.12	.13	.15	.18	.21	.10	.23	.03	.14	.22	.09	.50	.27	.11	.41	.92	.89	
24 SPD	2.18	0.70	.31	.32	.37	.17	.28	.28	.28	.28	.27	.34	.32	.30	.37	.10	.33	.32	.22	.49	.34	.19	.48	.87	.61	.80

Notes. D = D-Factor; CRU = Crudelia; EGO = Egoism; ENT = Entitlement; FRU = Frustration; GRE = Greed; MAC = Machiavellianism; MOR = Moral Disengagement; NAR = Narcissism; PSY = Psychopathy; SAD = Sadism; SEL = Self-Centeredness; SPI = Spitefulness; ATT = Attention Seeking; CAL = Callousness; DEC = Deceitfulness; GRA = Grandiosity; HOS = Hostility; IRR = Irresponsibility; MAN = Manipulativeness; SUS = Suspiciousness; PD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale)

Supplementary Table 2*Model fits and reliability (McDonald's ω) for all single factor models in Study 1*

	χ^2	df	p	RMSEA	SRMR	CFI*	ω
D16	290	104	< .001	.054	.052	.876	.85
CRU	477	65	< .001	.102	.077	.768	.87
EGO	214	54	< .001	.070	.055	.881	.83
ENT	90	27	< .001	.062	.036	.956	.88
FRU	323	77	< .001	.073	.067	.807	.72
GRE	64	14	< .001	.077	.040	.955	.85
MAC	133	27	< .001	.081	.051	.911	.83
MOR	104	20	< .001	.083	.054	.879	.77
NAR	108	9	< .001	.135	.075	.871	.80
PSY	110	27	< .001	.071	.052	.883	.72
SAD	123	35	< .001	.065	.065	.853	.77
SEL	1	2	.477	.000	.013	.999	.69
SPI	336	119	< .001	.055	.047	.898	.87
ATT	0	2	.818	.000	.004	.999	.85
CAL	5	2	.094	.048	.017	.993	.83
DEC	2	2	.343	.011	.014	.996	.82
GRA	9	2	.013	.075	.024	.984	.77
HOS	15	2	.001	.103	.034	.976	.82
IRR	3	2	.191	.033	.018	.992	.60
MAN	26	2	< .001	.140	.046	.952	.66
SUS	4	2	.142	.040	.017	.995	.72
PD	396	54	< .001	.102	.077	.851	.89
IPD	42	9	< .001	.078	.041	.952	.80
SPD	37	9	< .001	.072	.027	.976	.89

Notes. D16 = D-Factor; CRU = Crudelia; EGO = Egoism; ENT= Entitlement; FRU = Frustration; GRE = Greed; MAC = Machiavellianism; MOR = Moral Disengagement; NAR = Narcissism; PSY = Psychopathy; SAD = Sadism; SEL = Self-Centeredness; SPI = Spitefulness; ATT = Attention Seeking; CAL = Callousness; DEC = Deceitfulness; GRA = Grandiosity; HOS = Hostility; IRR = Irresponsibility; MAN = Manipulativeness; SUS = Suspiciousness; PD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale); *CFI is reported for the sake of transparency but not for the evaluation of model as suggested by recent research (Moshagen & Auerwald, 2018; van Laar & Braeken, 2022)

Supplementary Table 3

Mean, SD, observed correlations, and Cronbach's α (on the diagonal in bold) of all scales in Study 2

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1 D	2.03	.55	.86																							
2 CRU	2.01	.55	.69	.86																						
3 EGO	2.51	.66	.59	.53	.87																					
4 ENT	2.59	.73	.43	.35	.49	.88																				
5 FRU	2.45	.47	.69	.59	.63	.42	.70																			
6 GRE	2.29	.76	.47	.45	.47	.53	.43	.85																		
7 MAC	2.87	.69	.54	.42	.64	.52	.54	.53	.84																	
8 MOR	1.92	.62	.57	.50	.65	.45	.53	.49	.55	.83																
9 NAR	2.06	.73	.49	.37	.51	.66	.44	.56	.58	.55	.83															
10 PSY	1.91	.58	.64	.50	.54	.40	.57	.47	.55	.57	.57	.77														
11 SAD	1.45	.52	.55	.48	.45	.26	.48	.39	.37	.51	.42	.59	.89													
12 SEL	2.28	.78	.60	.61	.52	.41	.48	.49	.53	.48	.46	.57	.46	.76												
13 SPI	1.75	.54	.65	.54	.57	.40	.61	.44	.47	.64	.52	.63	.59	.52	.90											
14 ATT	1.77	.61	.37	.20	.34	.49	.25	.40	.38	.41	.64	.44	.33	.28	.38	.92										
15 CAL	1.46	.41	.72	.60	.49	.34	.50	.40	.44	.53	.43	.60	.60	.55	.58	.39	.91									
16 DEC	1.63	.51	.61	.43	.48	.36	.45	.47	.50	.54	.50	.57	.50	.47	.52	.51	.63	.89								
17 GRA	1.75	.60	.48	.34	.40	.63	.35	.40	.44	.45	.64	.42	.33	.37	.44	.62	.47	.47	.90							
18 HOS	1.76	.54	.61	.42	.47	.34	.48	.41	.45	.45	.43	.58	.50	.46	.49	.40	.64	.60	.39	.89						
19 IRR	1.43	.44	.43	.35	.36	.21	.30	.31	.24	.44	.30	.44	.43	.31	.45	.36	.52	.55	.29	.48	.82					
20 MAN	1.91	.58	.49	.32	.39	.41	.36	.40	.51	.44	.52	.51	.38	.39	.39	.54	.49	.67	.53	.47	.34	.84				
21 SUS	2.06	.51	.52	.41	.50	.30	.55	.32	.41	.36	.33	.41	.37	.37	.43	.20	.45	.40	.33	.52	.36	.25	.77			
22 PD	1.86	.57	.30	.25	.36	.13	.26	.28	.26	.33	.23	.35	.36	.28	.34	.22	.39	.41	.15	.54	.53	.21	.47	.91		
23 IPD	1.87	.71	.19	.15	.27	.06	.19	.23	.17	.24	.15	.26	.30	.18	.25	.14	.26	.32	.06	.45	.45	.14	.39	.93	.91	
24 SPD	1.85	.54	.38	.32	.39	.18	.30	.29	.31	.37	.28	.39	.37	.35	.39	.27	.47	.45	.24	.55	.54	.26	.48	.88	.65	.82

Notes. D = D-Factor; CRU = Crudelia; EGO = Egoism; ENT = Entitlement; FRU = Frustration; GRE = Greed; MAC = Machiavellianism; MOR = Moral Disengagement; NAR = Narcissism; PSY = Psychopathy; SAD = Sadism; SEL = Self-Centeredness; SPI = Spitefulness; ATT = Attention Seeking; CAL = Callousness; DEC = Deceitfulness; GRA = Grandiosity; HOS = Hostility; IRR = Irresponsibility; MAN = Manipulativeness; SUS = Suspiciousness; PD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale)

Supplementary Table 4*Model fits and reliability (McDonald's ω) for all single factor models in Study 2*

	χ^2	df	p	RMSEA	SRMR	CFI*	ω
D16	1500	104	< .001	.082	.083	.774	.83
CRU	1709	65	< .001	.112	.102	.724	.84
EGO	757	54	< .001	.081	.053	.881	.87
ENT	366	27	< .001	.079	.040	.941	.89
FRU	1256	77	< .001	.087	.079	.759	.64
GRE	163	14	< .001	.073	.033	.961	.85
MAC	391	27	< .001	.082	.049	.918	.84
MOR	239	20	< .001	.074	.044	.926	.83
NAR	220	9	< .001	.108	.054	.930	.83
PSY	262	27	< .001	.066	.047	.915	.74
SAD	408	35	< .001	.073	.046	.908	.85
SEL	6	2	0.044	.032	.012	.997	.75
SPI	871	119	< .001	.056	.044	.910	.89
ATT	434	20	< .001	.102	.039	.939	.92
CAL	1258	77	< .001	.087	.061	.866	.89
DEC	659	35	< .001	.094	.045	.910	.90
GRA	60	9	< .001	.053	.020	.987	.90
HOS	784	35	< .001	.103	.058	.885	.89
IRR	96	14	< .001	.054	.033	.967	.80
MAN	252	5	< .001	.157	.057	.910	.84
SUS	300	14	< .001	.101	.057	.895	.77
PD	1157	54	< .001	.101	.077	.870	.90
IPD	115	9	< .001	.077	.036	.958	.82
SPD	87	9	< .001	.066	.022	.982	.91

Notes. D16 = D-Factor; CRU = Crudelia; EGO = Egoism; ENT = Entitlement; FRU = Frustration; GRE = Greed; MAC = Machiavellianism; MOR = Moral Disengagement; NAR = Narcissism; PSY = Psychopathy; SAD = Sadism; SEL = Self-Centeredness; SPI = Spitefulness; ATT = Attention Seeking; CAL = Callousness; DEC = Deceitfulness; GRA = Grandiosity; HOS = Hostility; IRR = Irresponsibility; MAN = Manipulativeness; SUS = Suspiciousness; PD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale); *CFI is reported for the sake of transparency but not interpreted for the evaluation of model as suggested by recent research (Moshagen & Auerswald, 2018; van Laar & Braeken, 2022)

Supplementary Table 5

Mean, SD, observed correlations, and Cronbach's α (on the diagonal in bold) of all scales in Studies 3a-c

Study 3a									Study 3b								Study 3c							
	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1 D	2.2	0.61	.97						2.21	0.61	.97						2.26	0.64	.97					
2 Trait	1.95	0.56	.71	.85					1.61	0.52	.48	.76					1.98	0.61	.57	.82				
3 Flavor	2.74	1.01	.16	.30	.82				3.02	0.66	.40	.55	.83				1.25	0.44	.35	.51	.70			
4 GPD	2.13	0.58	.42	.52	.61	.84			2.19	0.60	.39	.50	.59	.85			2.17	0.58	.39	.52	.34	.82		
5 IPD	1.97	0.61	.51	.55	.40	.83	.73		2.01	0.60	.49	.50	.49	.83	.73		1.95	0.58	.47	.50	.33	.83	.69	
6 SPD	2.28	0.74	.25	.36	.63	.89	.49	.83	2.36	0.77	.23	.39	.53	.90	.50	.86	2.38	0.75	.23	.41	.26	.90	.50	.82

Notes. D = D-Factor; Trait = Hostility in Study 3a, Irresponsibility in Study 3b, Suspiciousness in Study 3c; Flavor = Emotion regulation in Study 3a, self-control in Study 3b, delusional paranoid thoughts in study 3c; GPD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale)

Supplementary Table 6*Model fits and reliability (McDonald's ω) for all measurement models in Studies 3a-c*

		χ^2	df	p	RMSEA	SRMR	CFI*	ω
Study 3a	D70	4664	2275	< .001	.038	.044	.848	.94
	Hos	468	35	< .001	.132	.084	.780	.83
	ER [†]	-	-	-	-	-	-	.82
	GPD	450	54	< .001	.102	.082	.797	.83
	IPD	56	9	< .001	.085	.046	.922	.73
	SPD	64	9	< .001	.093	.039	.949	.83
Study 3b	D70	4651	2275	< .001	.039	.045	.839	.94
	IRR	71	14	< .001	.076	.049	.919	.76
	SC	536	65	< .001	.102	.080	.762	.82
	GPD	429	54	< .001	.100	.082	.830	.83
	IPD	61	9	< .001	.091	.047	.917	.72
	SPD	54	9	< .001	.084	.037	.964	.86
Study 3c	D70	5208	2275	< .001	.038	.043	.850	.94
	SUS	73	14	< .001	.069	.036	.958	.82
	Para(Main)	14	5	.017	.044	.043	.941	.68
	Para (Suppl)	909	135	< .001	.080	.070	.813	.92
	GPD	478	54	< .001	.094	.073	.812	.82
	IPD	68	9	< .001	.086	.047	.906	.68
	SPD	68	9	< .001	.086	.037	.955	.82

Notes. D70 = D-Factor; Hos = Hostility; IRR = Irresponsibility; SUS = Suspiciousness 3c; ER = Emotion regulation; SC = Self-control; Para(Main) = Delusional Paranoid Thoughts subscale; Para(Suppl) = Delusional Paranoid Thoughts total scale; GPD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale); *CFI is reported for the sake of transparency but not interpreted for the evaluation of model fit as suggested by recent research (Moshagen & Auerwald, 2018; van Laar & Braeken, 2022); [†]with three items, the model is saturated and as such, model fit cannot be determined.

Supplementary Table 7

Hypothesis tests and results of the relevant test statistics of all three Studies (3a-c)

	Study 3a			Study 3b			Study 3c			Study 3c (full scale)		
Hypothesis and relevant test statistic	IPD	SPD	GPD	IPD	SPD	GPD	IPD	SPD	GPD	IPD	SPD	GPD
H1: Cor (flavor, trait)	.34	.34	.34	.68	.67	.67	.68	.68	.68	.83	.83	.83
H2: Cor (flavor, IPD)	.48	.42	.75	.58	.59	.64	.51	.35	.43	.60	.51	.58
H3: ΔR^2 of flavor over D (model 1 vs. model 2)	17%	54%	52%	21%	35%	37%	15%	13%	23%	15%	21%	23%
H4: ΔR^2 of trait over D (model 1 vs. model 3)	15%	30%	36%	25%	30%	35%	19%	21%	28%	19%	25%	28%
H5: decrease in ΔR^2 of trait over D ΔR^2 (model2vs.model4) - ΔR^2 (model1vs.model3)	12%	30%	35%	21%	30%	34%	16%	5%	20%	16%	22%	25%

Notes. D = D-Factor; Trait = Hostility in Study 3a, Irresponsibility in Study 3b, Suspiciousness in Study 3c; Flavor = Emotion regulation in Study 3a, self-control in Study 3b, delusional paranoid thoughts in study 3c; GPD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale)

Supplementary Table 8

Hypothesis tests and results of the relevant test statistics of all three Studies (3a-c) when using the D16 instead of the D70

	Study 3a			Study 3b			Study 3c			Study 3c (full scale)		
Hypothesis and relevant test statistic	IPD	SPD	GPD	IPD	SPD	GPD	IPD	SPD	GPD	IPD	SPD	GPD
H1: Cor (flavor, trait)	.35	.35	.35	.68	.68	.68	.68	.68	.68	.83	.83	.83
H2: Cor (flavor, IPD)	.48	.42	.75	.58	.61	.65	.51	.35	.43	.60	.51	.58
H3: ΔR^2 of flavor over D (model 1 vs. model 2)	16%	55%	50%	15%	32%	32%	10%	12%	14%	11%	20%	20%
H4: ΔR^2 of trait over D (model 1 vs. model 3)	13%	15%	17%	18%	26%	29%	13%	20%	22%	14%	24%	25%
H5: decrease in ΔR^2 of trait over D ΔR^2 (model2vs.model4) - ΔR^2 (model1vs.model3)	11%	15%	17%	15%	26%	29%	10%	12%	14%	11%	22%	22%

Notes. D = D-Factor; Trait = Hostility in Study 3a, Irresponsibility in Study 3b, Suspiciousness in Study 3c; Flavor = Emotion regulation in Study 3a, self-control in Study 3b, delusional paranoid thoughts in study 3c; GPD = Personality dysfunction (overall score); IPD = interpersonal personality dysfunction (subscale); SPD = self-personality dysfunction (subscale)