

Table 1: Intergroup General

	Aggregated [across participants]						Contemporaneous [within participants]					
	Study 1		Study 2		Study 3		Study 1		Study 2		Study 3	
	<i>B</i>	$\eta_p^2$	<i>B</i>	$\eta_p^2$	<i>B</i>	$\eta_p^2$	<i>B</i>	$\beta$	<i>B</i>	$\beta$	<i>B</i>	$\beta$
Intercept0	70.50**** [66.06, 74.94]		67.62**** [64.16, 71.08]		64.83**** [61.50, 68.16]		67.44**** [61.71, 73.17]		63.72**** [59.42, 68.01]		56.30**** [51.58, 61.02]	
SumContactNL	0.27 [-0.15, 0.69]	0.02	0.81** [0.32, 1.29]	0.08	0.15 [-0.08, 0.38]	0.02						
AvQuality	0.84** [0.36, 1.33]	0.39	0.25 [-0.14, 0.64]	0.01	0.36* [0.04, 0.68]	0.07						
SumContactNLAvQuality	-0.05** [-0.08, -0.01]	0.34	0.02 [-0.03, 0.08]	0.01	0.01 [-0.02, 0.03]	0.01	2.48**** [1.36, 3.59]	1.07 [0.59, 1.54]	2.99**** [1.45, 4.54]	0.11 [0.07, 0.16]	5.63**** [3.97, 7.29]	0.21 [0.15, 0.27]
OutgroupInteraction							0.43 [-0.68, 1.54]	0.16 [-0.32, 0.63]	0.01 [-0.76, 0.78]	0.01 [-0.03, 0.05]	0.34 [-0.49, 1.18]	0.02 [-0.02, 0.05]
NonOutgroupInteraction												
Random												
$\sigma^2$						69.92						
$\tau_{00}$						164.13 (PID)						
$\tau_{11}$												
$\rho_{01}$												
$\rho_{00}$												
Fit												
Groups												
N	21		113		71		23		113		71	
F Test	F(3, 17) = 6.66, p = 0.004		F(3, 109) = 3.75, p = 0.013		F(3, 67) = 2.15, p = 0.102				4963		3907	
$R^{2(a)}$	0.540 / 0.459		0.094 / 0.069		0.088 / 0.047		0.006 / 0.703		0.003 / 0.817		0.026 / 0.708	
AIC							8788		36476		29074	
BIC							8814		36542		29137	
ICC							0.7013		0.8167		0.7007	

Note:  
PID = Participant ID number (grouping variable)  
 $\sigma^2$ : residual variance,  $\tau_{avg}$ : random intercept variance,  $\tau_{au11}$ : random slope variance(s),  $\tau_{ho0}$ : random slope-intercept correlation(s),  $\tau_{ho0}$ : correlation(s) between random slopes  
\*\*\*\*  $p < .0001$ , \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$   
^ For linear regression:  $R^2 / R^2_{adjusted}$ , for multilevel regression:  $R^2_{marginal} / R^2_{conditional}$

Table 2: Robustness Analyses

	Contact (Full Sample)						Self-Determination Theory (Outgroup Interactions only)					
	Study 1		Study 2		Study 3		Study 1		Study 2		Study 3	
	<i>B</i>	$\beta$	<i>B</i>	$\beta$	<i>B</i>	$\beta$	<i>B</i>	$\beta$	<i>B</i>	$\beta$	<i>B</i>	$\beta$
<b>Fixed</b>												
(Intercept)	68.88*** [63.24, 74.53]		63.90*** [59.56, 68.24]		57.06*** [52.63, 61.48]		72.53*** [66.79, 78.27]		70.69*** [67.53, 73.85]		68.32*** [63.11, 73.53]	
CoreNeed	-0.10* [-0.18, -0.01]	0.15 [0.07, 0.22]	-0.03 [-0.08, 0.02]	0.08 [0.05, 0.12]	-0.14*** [-0.21, -0.08]	0.12 [0.08, 0.16]	0.09* [0.01, 0.18]	0.20 [0.09, 0.31]	0.08** [0.03, 0.13]	0.08 [0.00, 0.16]	0.15*** [0.07, 0.22]	0.13 [0.07, 0.20]
OutgroupInteraction	1.81* [0.25, 3.37]	0.14 [0.03, 0.24]	2.88*** [1.36, 4.40]	0.11 [0.06, 0.16]	3.41*** [1.74, 5.07]	0.23 [0.15, 0.27]						
CoreNeedOutgroupInteraction	0.13*** [-0.07, 0.18]	0.13 [0.07, 0.18]	0.06** [0.02, 0.10]	0.04 [0.01, 0.08]	0.17*** [0.12, 0.21]	0.08 [0.05, 0.11]						
Competence							0.05 [-0.16, 0.25]	-0.05 [-0.21, 0.11]	0.06* [0.01, 0.10]	0.07 [-0.02, 0.17]	0.06* [0.02, 0.10]	0.09 [0.02, 0.15]
Autonomy							0.08 [-0.12, 0.25]	0.20 [0.09, 0.31]	0.03 [-0.02, 0.08]	0.04 [-0.06, 0.14]	0.04 [-0.03, 0.08]	0.06 [-0.01, 0.13]
Relatedness							0.10*** [0.05, 0.14]	0.23 [0.13, 0.34]	0.07*** [0.04, 0.10]	0.17 [0.09, 0.25]	0.06** [-0.02, 0.09]	0.11 [0.05, 0.18]
<b>Random</b>												
$\sigma^2$	64.7		77.34		84.37		41.11		82.65		83.36	
$\tau_{00}$	174.00 (PID)		523.56 (PID)		339.72 (PID)		176.39 (PID)		262.18 (PID)		181.84 (PID)	
$\tau_{11}$	0.01 (PID.CoreNeed)		0.00 (PID.CoreNeed)		0.01 (PID.CoreNeed)		0.02 (PID.CoreNeed)		0.01 (PID.CoreNeed)		0.05 (PID.CoreNeed)	
	6.05 (PID.OutgroupInteraction)		46.82 (PID.OutgroupInteraction)		40.96 (PID.OutgroupInteraction)		0.20 (PID.Competence)		0.00 (PID.Competence)		0.01 (PID.Competence)	
							0.14 (PID.Autonomy)		0.00 (PID.Autonomy)		0.00 (PID.Autonomy)	
							0.00 (PID.Relatedness)		0.00 (PID.Relatedness)		0.01 (PID.Relatedness)	
							0.55 (PID.CoreNeed)		-0.16 (PID.CoreNeed)		-0.25 (PID.CoreNeed)	
$\rho_{01}$	0.01 (PID.CoreNeed)	0.27 (PID.CoreNeed)	0.27 (PID.CoreNeed)	-0.15 (PID.CoreNeed)	-0.15 (PID.CoreNeed)	-0.15 (PID.Competence)	-0.15 (PID.Competence)	-0.15 (PID.Competence)	-0.29 (PID.Competence)	-0.23 (PID.Competence)	-0.29 (PID.Competence)	-0.29 (PID.Competence)
	-0.27 (PID.OutgroupInteraction)	-0.68 (PID.OutgroupInteraction)	-0.68 (PID.OutgroupInteraction)	-0.68 (PID.OutgroupInteraction)	-0.68 (PID.OutgroupInteraction)	-0.09 (PID.Autonomy)	-0.14 (PID.Autonomy)	-0.14 (PID.Autonomy)	-0.23 (PID.Autonomy)	-0.23 (PID.Autonomy)	-0.23 (PID.Autonomy)	-0.23 (PID.Autonomy)
						0.56 (PID.Relatedness)	0.56 (PID.Relatedness)	0.56 (PID.Relatedness)	0.02 (PID.Relatedness)	0.02 (PID.Relatedness)	0.02 (PID.Relatedness)	0.02 (PID.Relatedness)
						0.03 (PID.CoreNeed-Autonomy)	0.03 (PID.CoreNeed-Autonomy)	0.03 (PID.CoreNeed-Autonomy)	0.57 (PID.CoreNeed-Autonomy)	0.57 (PID.CoreNeed-Autonomy)	0.57 (PID.CoreNeed-Autonomy)	0.57 (PID.CoreNeed-Autonomy)
						-0.93 (PID.Competence-Autonomy)	-0.93 (PID.Competence-Autonomy)	-0.93 (PID.Competence-Autonomy)	-0.68 (PID.Competence-Autonomy)	-0.68 (PID.Competence-Autonomy)	-0.68 (PID.Competence-Autonomy)	-0.68 (PID.Competence-Autonomy)
$\rho_{10}$	0.33 (PID.CoreNeed-OutgroupInteraction)	-0.08 (PID.CoreNeed-OutgroupInteraction)	-0.08 (PID.CoreNeed-OutgroupInteraction)	0.01 (PID.CoreNeed-OutgroupInteraction)	0.01 (PID.CoreNeed-OutgroupInteraction)	-0.11 (PID.CoreNeed-Competence)	-0.11 (PID.CoreNeed-Competence)	-0.11 (PID.CoreNeed-Competence)	0.59 (PID.CoreNeed-Competence)	0.59 (PID.CoreNeed-Competence)	0.59 (PID.CoreNeed-Competence)	0.59 (PID.CoreNeed-Competence)
						0.17 (PID.CoreNeed-Relatedness)	0.17 (PID.CoreNeed-Relatedness)	0.17 (PID.CoreNeed-Relatedness)	-0.27 (PID.CoreNeed-Relatedness)	-0.27 (PID.CoreNeed-Relatedness)	-0.27 (PID.CoreNeed-Relatedness)	-0.27 (PID.CoreNeed-Relatedness)
						0.16 (PID.Competence-Relatedness)	0.16 (PID.Competence-Relatedness)	0.16 (PID.Competence-Relatedness)	-0.79 (PID.Competence-Relatedness)	-0.79 (PID.Competence-Relatedness)	-0.79 (PID.Competence-Relatedness)	-0.79 (PID.Competence-Relatedness)
						-0.10 (PID.Autonomy-Relatedness)	-0.10 (PID.Autonomy-Relatedness)	-0.10 (PID.Autonomy-Relatedness)	-0.35 (PID.Autonomy-Relatedness)	-0.35 (PID.Autonomy-Relatedness)	-0.35 (PID.Autonomy-Relatedness)	-0.35 (PID.Autonomy-Relatedness)
<b>Fit</b>												
AIC	8761		36475		28974		2757		7219		12581	
BIC	8817		36546		29043		2849		7321		12695	
N	1225		4965		3909		386		935		1672	
Groups	23		113		71		21		108		70	
BIC	0.722		0.8168		0.7112						0.6997	
$R^2_{\text{intercept}} / R^2_{\text{conditional}}$	0.617 / 0.727		0.005 / 0.818		0.036 / 0.722		0.249 / NA		0.093 / NA		0.035 / 0.710	

Note:  
PID = Participant ID number (grouping variable)  
 $\sigma^2 / \sigma^2$ : residual variance,  $\tau_{00}$ : random intercept variance,  $\tau_{11}$ : random slope variance(s),  $\rho_{01}$ : random slope-intercept correlation(s),  $\rho_{10}$ : correlation(s) between random slopes  
\*\*\*  $p < .0001$ , \*\*  $p < .001$ , \*  $p < .01$ ,  $^{\circ}$   $p < .05$