Supplemental Reverse Directional Analyses

In our effectiveness analyses (Model 2), we focused on emotion regulation predicting negative emotion. We chose this analysis because the emotion literature has generally focused on this direction of effects. However, negative emotion also predicts the subsequent use of emotion regulation strategies (Brans, Koval, Verduyn, Lim, & Kuppens, 2013). Thus, an alternate explanation of these results is that the more negative low differentiators feel, the more likely they are to try most strategies. In contrast, it may be that high differentiators are less likely to do this, because differentiation itself can be an emotion regulation strategy, as in the literature on affect labelling (Torre & Lieberman, 2018). This explanation is somewhat counteracted by the fact we controlled for negative affect at the previous time-point, but our analyses are correlational, so we cannot definitely rule out such an explanation. To provide a more direct test of this alternate explanation, we ran a second set of models testing this reversal of direction.

Question wording was important in determining how to run these models: emotion items were asked with reference to "*right now*" and emotion regulation items were asked "*since the previous beep*" (i.e. the previous sampling moment). With this in mind, we predicted each emotion regulation strategy at T with negative emotion at T-1, controlling for emotion regulation strategy use at T-1. All other model specifications were the same as Model 2 in the paper. The only change was that in Study 1, we omitted the random slopes per wave for negative emotion at T-1, since there were convergence errors when these slopes were included (likely because they explained a very small proportion of the variance).

That means that emotion temporally preceded emotion regulation in these models, and these analyses test whether the tendency to use each strategy in response to feeling negative emotion is a function of differentiation. If the alternate direction explains these effects, we should see significant interactions between emotion differentiation and negative

emotion in predicting subsequent emotion regulation. We present the results of these models for Study 1 in Table S1 and Study 2 in Table S2.

In Study 1, we did not find significant interactions for four of the five regulation strategies. We did find an interaction for social sharing, such that for low differentiators, negative emotion was significant positively associated with social sharing. For high differentiators, there was no association. In Study 2, we found no interactions for any of the six strategies, not replicating the finding with social sharing. In sum, we find little evidence for this reverse causal direction. However, these are correlational studies, and thus we are unable to make strong inferences about directionality.

Table S1.

Effects of Interactions between Emotion Differentiation and Negative Emotion on Emotion Regulation Strategies in Study 1.

	Strategy														
	Rumination			Distraction			Cognitive reappraisal			Expressive suppression			Social sharing		
	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*P*	Estimate (SE)	95% CI	*p*
Intercept	-0.03 (0.05)	[-0.13, 0.07]	.593	-0.004 (0.05)	[-0.11, 0.10]	.936	-0.004 (0.04)	[-0.08, 0.07]	.929	-0.02 (0.05)	[-0.11, 0.08]	.746	-0.01 (0.03)	[-0.08, 0.05]	.711
Lagged negative emotion	0.09 (0.01)	[0.07, 0.10]	<.001	0.05 (0.01)	[0.03, 0.06]	<.001	0.03 (0.02)	[0.01, 0.06]	.142	0.05 (0.01)	[0.03, 0.06]	<.001	0.02 (0.02)	[-0.01, 0.05]	.312
Emotion differentiation	-0.09 (0.01)	[-0.11, -0.08]	<.001	-0.05 (0.01)	[-0.06, -0.03]	<.001	-0.10 (0.01)	[-0.11, -0.09]	<.001	-0.06 (0.01)	[-0.07, -0.05]	<.001	-0.10 (0.01)	[-0.11, -0.08]	<.001
Lagged negative emotion × Emotion differentiation	-0.01 (0.01)	[-0.02, 0.01]	.211	-0.01 (0.01)	[-0.02, 0.01]	.480	-0.003 (0.01)	[-0.02, 0.01]	.678	-0.01 (0.01)	[-0.02, 0.0005]	.060	**-0.02 (0.01)**	**[-0.03, -0.003]**	**.014**
Lagged strategy	0.15 (0.01)	[0.12, 0.17]	.003	0.12 (0.02)	[0.09, 0.15]	.013	0.08 (0.01)	[0.06, 0.09]	<.001	0.11 (0.01)	[0.09, 0.13]	.005	0.14 (0.01)	[0.12, 0.16]	<.001

Notes. Lines including the effects of interest are shaded grey. Significant effects in these lines are bolded. Strategy = Emotion regulation strategy named at the top of each column.

Table S2.

Effects of Interactions between Emotion Differentiation and Negative Emotion on Emotion Regulation Strategies in Study 2.

	Strategy																	
	Rumination			Distraction			Cognitive reappraisal			Acceptance			Expressive suppression			Social sharing		
	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*p*	Estimate (SE)	95% CI	*p*
Intercept	-0.03 (0.06)	[-0.15, 0.09]	.578	-0.02 (0.08)	[-0.18, 0.14]	.836	-0.02 (0.07)	[-0.16, 0.11]	.720	0.01 (0.08)	[-0.15, 0.16]	.949	-0.01 (0.07)	[-0.15, 0.13]	.891	-0.05 (0.05)	[-0.14, 0.05]	.326
Lagged negative emotion	0.08 (0.02)	[0.05, 0.11]	<.001	0.02 (0.01)	[-0.0004, 0.04]	.058	0.04 (0.01)	[0.01, 0.07]	.007	-0.04 (0.01)	[-0.06, -0.01]	.004	0.04 (0.02)	[0.01, 0.06]	.022	0.09 (0.02)	[0.05, 0.13]	<.001
Emotion differentiation	-0.14 (0.06)	[-0.26, -0.02]	.026	0.04 (0.08)	[-0.12, 0.20]	.623	-0.07 (0.07)	[-0.21, 0.06]	.289	0.10 (0.08)	[-0.05, 0.25]	.207	-0.16 (0.07)	[-0.31, -0.02]	.029	-0.10 (0.05)	[-0.20, -0.01]	.032
Percentage passed	-0.21 (0.06)	[-0.33, -0.09]	<.001	-0.11 (0.08)	[-0.27, 0.05]	.179	-0.16 (0.07)	[-0.30, -0.03]	.021	0.14 (0.08)	[-0.01, 0.29]	.072	-0.16 (0.07)	[-0.31, -0.02]	.032	0.002 (0.05)	[-0.09, 0.10]	.961
Lagged negative emotion × Emotion differentiation	-0.02 (0.02)	[-0.05, 0.01]	.207	-0.02 (0.01)	[-0.03, 0.003]	.110	0.17 (0.02)	[-0.04, 0.01]	.231	-0.01 (0.01)	[-0.04, 0.01]	.246	-0.01 (0.01)	[-0.04, 0.02]	.518	0.32 (0.02)	[-0.05, 0.03]	.495
Lagged strategy	0.23 (0.02)	[0.19, 0.27]	<.001	0.15 (0.02)	[0.12, 0.18]	<.001	-0.02 (0.01)	[0.13, 0.22]	<.001	0.17 (0.02)	[0.13, 0.20]	<.001	0.11 (0.02)	[0.07, 0.14]	<.001	-0.01 (0.02)	[0.28, 0.35]	<.001

Notes. Lines including the effect of interest are shaded grey. Significant effects in these lines are bolded. Strategy = Emotion regulation strategy named at the top of each column.

References

Brans, K., Koval, P., Verduyn, P., Lim, Y. L., & Kuppens, P. (2013). The regulation of negative and positive affect in daily life. *Emotion, 13*(5), 926-939. doi:10.1037/a0032400

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