

Research Note – Why Following Friends Can Hurt You: An Exploratory Investigation of the Effects of Envy on Social Networking Sites among College-Age Users

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Appendix A

Table A.1: Association between Envy and Self-directed SWB-related Variables: Overview of Selected Studies

SWB-related Variables (Relationship)	Supporting Studies
Depression (+)	Cohen-Charash (2009) Gold (1996) Salovey and Rodin (1984) Silver and Sabini (1978) Smith et al. (1999)
Anxiety; tension (+)	Cohen-Charash (2009) Gold (1996) Salovey and Rodin (1984)
Inferiority (+)	Gold (1996) Parrott and Smith (1993) Smith et al. (1999) Smith et al. (1994)
Self-esteem (-)	Smith et al. (1999)
Neuroticism (+)	Smith et al. (1999)
Resentment (+)	Parrott and Smith (1993) Smith et al. (1999)
Frustration (+)	van de Ven et al. (2009)
Self-regulatory depletion (+)	Hill et al. (2011)
Life satisfaction (-)	Smith et al. (1999)
Relational satisfaction (-)	Yoshimura (2010)
Happiness (-)	Smith et al. (1999)
Mood disturbance (+)	Cohen-Charash (2009)
Phobic anxiety (+)	Gold (1996)
Somatization (+)	Gold (1996)
Obsessive compulsive disorder (+)	Gold (1996)
Disapproval of feelings (+)	Parrott and Smith (1993)
Longing (+)	Parrott and Smith (1993)

Table A.2: Envy-Coping Strategies / Responses: Overview of Selected Studies

Categories of Envy-Coping Strategies / Responses	Supporting Studies
Hurting the target (e.g. reputation, performance; social undermining; degradation of the target; belittling)	Cohen-Charash (2009) van de Ven et al. (2009) Duffy et al. (2012) Silver and Sabini (1978) Salovey and Rodin (1984) Schaubroeck and Lam (2004) Moran and Schweitzer (2008) Gino and Pierce (2009)
Self-enhancement (including self-bolstering; matching and social differentiation)	Yoshimura (2010) Salovey and Rodin (1988) Van de Ven et al. (2011)
Improving (position of self; job performance)	Cohen-Charash (2009) Schaubroeck and Lam (2004) Parrott and Smith (1993)
Avoidance; not desiring friendship with the target	Yoshimura (2010) Salovey and Rodin (1984)
Deception; dishonesty	Moran and Schweitzer (2008) Gino and Pierce (2009)
Social loafing	Duffy and Shaw (2000)
Absenteeism	Duffy and Shaw (2000)
Creating negative work atmosphere	Cohen-Charash (2009)
Moral disengagement	Duffy et al. (2012)
Selective ignoring	Salovey and Rodin (1988)
Self-reliance	Salovey and Rodin (1988)
Calm communication	Yoshimura (2010)
Developing positive relationship with the target	Cohen-Charash (2009)

Appendix B

Table B.1: Construct Operationalization and Descriptive Statistics

<i>Item</i>	<i>Mean</i>	<i>SD</i>	<i>Load- ing*</i>	<i>AVE</i>	<i>CR</i>	<i>CA</i>
Envy on an SNS (based on Vecchio, 1995; 2000); Scale: 1=(almost) never; 7=very often.						
<i>When using Facebook, how often are you thinking that:</i>						
Most of my Facebook friends have it better than I do.	2.029	1.276	0.816	0.572	0.888	0.848
The posts of my Facebook friends get more attention (e.g. "likes", comments etc.) than mine.	3.116	1.747	0.604			
I don't know why, but I usually seem to feel myself as an underdog on Facebook.	1.900	1.277	0.806			
It is somewhat annoying to see on Facebook how successful some of my Facebook friends are.	2.204	1.387	0.829			
It is somewhat disturbing to see how popular some others are on Facebook.	2.204	1.483	0.766			
It is somehow disturbing when I see on Facebook how much traveling others can afford.	2.542	1.584	0.691			
Social Information Consumption on an SNS (based on Koroleva et al., 2011); Scale: 1=never; 7=several times a day.						
<i>On Facebook, how often do you?</i>						
...look through the News Feed.	5.617	1.722	0.744	0.646	0.880	0.818
...follow what your friends are sharing.	4.943	1.687	0.812			
...click through the content your friends have shared (as photos, videos).	4.597	1.566	0.838			
...browse the photos your friends shared.	4.114	1.437	0.819			
Social information sharing on an SNS (based on Koroleva et al., 2011); Scale:1=never; 7=several times a day.						
<i>On Facebook, how often do you?</i>						
...react to posts of your friends (e.g., by commenting, "liking" etc.).	4.291	1.531	0.831	0.736	0.893	0.821
...post something (e.g., status update, photos, links etc.).	2.923	1.189	0.868			
...keep your friends updated about yourself.	2.874	1.434	0.875			
Affective Well-being (operationalized as "Sadness on an SNS", based on Watson et al., 1988, and Watson and Clark, 1994); Scale: 1=(almost) never; 5=always; (items reversed prior to evaluation).						
<i>In the following you find a list of feelings people have when using Facebook. When you think about how you feel when using Facebook, to what extent do you feel:</i>						
...sad (reversed)	6.238	0.771	0.790	0.703	0.922	0.894
...blue (reversed)	6.220	0.873	0.843			
...downhearted (reversed)	6.320	0.812	0.855			
...alone (reversed)	6.139	0.930	0.849			
...lonely (reversed)	6.126	0.945	0.854			
Cognitive Well-being (operationalized as "Satisfaction with life", based on Diener et al., 1985); Scale: 1=strongly disagree; 7=strongly agree.						
<i>To what extent do you agree with the following statements?</i>						
In most ways my life is close to my ideal.	4.646	1.403	0.867	0.754	0.902	0.837
The conditions of my life are excellent.	4.851	1.419	0.824			
I am satisfied with my life.	5.354	1.300	0.912			
Self-enhancement on an SNS (Krasnova et al., 2010; Kim and Lee, 2011); Scale: 1= strongly disagree; 7= strongly agree; additionally "not applicable (I never post)" was available.						
<i>In my communication on Facebook, I tend to...</i>						
...post only things showing my best side.	4.369	4.369	0.848	0.743	0.897	0.828
...share posts/photos showing me as a happy person.	4.570	4.570	0.904			
...show positive feelings when posting something.	4.662	4.662	0.832			
Dispositional Envy (Smith et al., 1999); Scale:1= strongly agree, 7= strongly disagree.						
<i>To what extent to you agree with the following statements?</i>						
I feel envy every day.	2.012	1.272	0.830	0.680	0.894	0.843

The bitter truth is that I generally feel inferior to others.	2.236	1.429	0.829			
Feelings of envy constantly torment me.	2.039	1.226	0.866			
I am troubled by feelings of inadequacy.	2.933	1.588	0.770			
Extraversion (Rammstedt and John, 2007); Scale:1=strongly agree, 7=strongly disagree.						
<i>I see myself as someone who...</i>						
...is reserved.	4.112	1.585	0.931	0.857	0.923	0.834
...is outgoing, sociable (Reversed).	4.580	1.417	0.921			
Neuroticism (Rammstedt and John, 2007); Scale:1=strongly agree, 7=strongly disagree.						
<i>I see myself as someone who...</i>						
...is relaxed, handles stress well (Reversed).	3.823	1.445	0.862	0.750	0.857	0.666
...gets nervous easily.	3.817	1.543	0.870			

AVE=Average Variance Extracted; CR=Composite Reliability; CA=Cronbach's Alpha;

*All item loadings were highly (i.e. at 1% or lower) significant.

Appendix C

Table C.1: Cross Loadings

	AWB	Age	CWB	DE	ENV	Extra	Gender	Neuro	NuFr	SE	SIC	SIS
Affective well-being (AWB) item 1	0.790	0.067	0.285	-0.434	-0.471	0.063	0.118	-0.271	-0.042	-0.117	-0.193	-0.142
Affective well-being (AWB) item 2	0.843	0.137	0.260	-0.467	-0.508	0.139	0.104	-0.348	0.013	-0.089	-0.110	-0.087
Affective well-being (AWB) item 3	0.855	0.126	0.270	-0.509	-0.579	0.150	0.056	-0.280	-0.028	-0.111	-0.125	-0.095
Affective well-being (AWB) item 4	0.849	0.150	0.296	-0.470	-0.498	0.167	0.056	-0.326	0.002	-0.067	-0.200	-0.099
Affective well-being (AWB) item 5	0.854	0.117	0.286	-0.472	-0.483	0.181	0.043	-0.326	0.009	-0.073	-0.165	-0.070
Age	0.144	1.000	-0.009	-0.107	-0.096	0.061	0.095	-0.076	-0.137	-0.088	-0.049	0.033
Cognitive well-being (CWB) item 1	0.265	0.030	0.867	-0.357	-0.304	0.160	0.032	-0.340	0.043	0.050	-0.007	-0.015
Cognitive well-being (CWB) item 2	0.206	-0.036	0.824	-0.293	-0.261	0.132	0.051	-0.315	0.112	0.104	-0.014	-0.062
Cognitive well-being (CWB) item 3	0.373	-0.018	0.912	-0.462	-0.366	0.208	-0.002	-0.406	0.098	0.022	-0.047	-0.034
Dispositional envy (DE) item 1	-0.440	-0.064	-0.326	0.830	0.485	-0.097	-0.010	0.301	-0.001	0.093	0.040	0.014
Dispositional envy (DE) item 2	-0.489	-0.114	-0.398	0.829	0.440	-0.176	-0.149	0.450	-0.067	0.111	0.037	0.011
Dispositional envy (DE) item 3	-0.443	-0.120	-0.333	0.866	0.504	-0.068	-0.094	0.351	0.019	0.149	0.083	0.018
Dispositional envy (DE) item 4	-0.494	-0.050	-0.393	0.770	0.408	-0.177	-0.057	0.430	-0.025	0.064	0.080	0.031
Envy on an SNS (ENV) item 1	-0.499	-0.050	-0.363	0.455	0.816	-0.155	-0.088	0.229	-0.015	0.142	0.183	0.061
Envy on an SNS (ENV) item 2	-0.359	-0.044	-0.187	0.263	0.604	-0.132	-0.004	0.150	0.008	0.246	0.164	0.087
Envy on an SNS (ENV) item 3	-0.565	-0.085	-0.305	0.548	0.806	-0.094	-0.079	0.315	-0.056	0.144	0.138	0.049
Envy on an SNS (ENV) item 4	-0.474	-0.043	-0.299	0.460	0.829	-0.071	-0.041	0.231	0.038	0.180	0.200	0.166
Envy on an SNS (ENV) item 5	-0.452	-0.149	-0.222	0.411	0.766	-0.098	-0.027	0.243	0.058	0.226	0.183	0.129
Envy on an SNS (ENV) item 6	-0.368	-0.062	-0.238	0.344	0.691	-0.124	-0.083	0.177	-0.010	0.144	0.187	0.138
Extraversion (Extra) item 1	0.188	0.074	0.191	-0.164	-0.136	0.931	-0.103	-0.290	0.312	0.046	0.088	0.111
Extraversion (Extra) item 2	0.122	0.037	0.171	-0.116	-0.134	0.921	-0.124	-0.239	0.307	0.140	0.136	0.135
Gender	0.089	0.095	0.028	-0.093	-0.074	-0.122	1.000	-0.189	0.017	-0.130	0.002	0.074
Neuroticism (Neuro) item 1	-0.319	-0.031	-0.353	0.380	0.256	-0.127	-0.232	0.862	-0.080	0.054	0.059	0.026
Neuroticism (Neuro) item 2	-0.321	-0.100	-0.359	0.414	0.269	-0.366	-0.098	0.870	-0.142	0.084	0.031	0.012
Number of friends on an SNS (NuFr)	-0.011	-0.137	0.097	-0.020	0.002	0.334	0.017	-0.129	1.000	0.209	0.274	0.251
Self-enhancement on an SNS (SE) item 1	-0.174	-0.081	0.025	0.156	0.251	0.057	-0.095	0.085	0.184	0.848	0.304	0.208
Self-enhancement on an SNS (SE) item 2	-0.087	-0.097	0.061	0.099	0.207	0.083	-0.151	0.062	0.198	0.904	0.278	0.267
Self-enhancement on an SNS (SE) item 3	-0.009	-0.042	0.082	0.075	0.132	0.123	-0.084	0.060	0.154	0.832	0.207	0.232
Social information consumption on an SNS (SIC) item 1	-0.117	-0.103	-0.049	0.041	0.167	-0.003	-0.015	0.048	0.213	0.255	0.744	0.424
Social information consumption on an SNS (SIC) item 2	-0.141	0.064	-0.026	0.028	0.179	0.094	-0.036	0.029	0.171	0.268	0.812	0.487
Social information consumption on an SNS (SIC) item 3	-0.164	0.001	0.000	0.067	0.166	0.099	0.051	0.038	0.267	0.259	0.838	0.464
Social information consumption on an SNS (SIC) item 4	-0.174	-0.108	-0.018	0.090	0.218	0.173	0.008	0.051	0.233	0.218	0.819	0.371
Social information sharing on an SNS (SIS) item 1	-0.090	-0.041	-0.001	0.019	0.096	0.127	0.013	0.010	0.268	0.255	0.519	0.831
Social information sharing on an SNS (SIS) item 2	-0.068	0.134	-0.081	0.013	0.123	0.138	0.116	0.014	0.188	0.213	0.409	0.868
Social information sharing on an SNS (SIS) item 3	-0.138	0.001	-0.027	0.024	0.128	0.080	0.065	0.032	0.190	0.237	0.453	0.875

Note: Affective well-being was operationalized as "Sadness on an SNS" (items were reversed prior to evaluation).

Table C.2: Square root of Average Variance Extracted (Diagonal Elements) and Correlations Between Latent Variables (Off-Diagonal Elements)

Construct	AWB	Age	CWB	DE	ENV	Extra	Gender	Neuro	NuFr	SE	SIC	SIS
Affective well-being (AWB)	0.839											
Age	0.144	1.000										
Cognitive well-being (CWB)	0.333	-0.009	0.868									
Dispositional envy (DE)	-0.562	-0.107	-0.435	0.825								
Envy on an SNS (ENV)	-0.607	-0.096	-0.362	0.559	0.756							
Extraversion (Extra)	0.168	0.061	0.196	-0.152	-0.146	0.926						
Gender	0.089	0.095	0.028	-0.093	-0.074	-0.122	1.000					
Neuroticism (Neuro)	-0.370	-0.076	-0.411	0.459	0.303	-0.287	-0.189	0.866				
Number of friends on an SNS (NuFr)	-0.011	-0.137	0.097	-0.020	0.002	0.334	0.017	-0.129	1.000			
Self-enhancement on an SNS (SE)	-0.109	-0.088	0.063	0.129	0.232	0.099	-0.130	0.080	0.209	0.862		
Social information consumption on an SNS (SIC)	-0.187	-0.049	-0.028	0.073	0.230	0.120	0.002	0.052	0.274	0.308	0.804	
Social information sharing on an SNS (SIS)	-0.117	0.033	-0.041	0.022	0.135	0.132	0.074	0.022	0.251	0.274	0.538	0.858

Table C.3: Heterotrait-monotrait (HTMT) results according to Henseler et al. (2014)

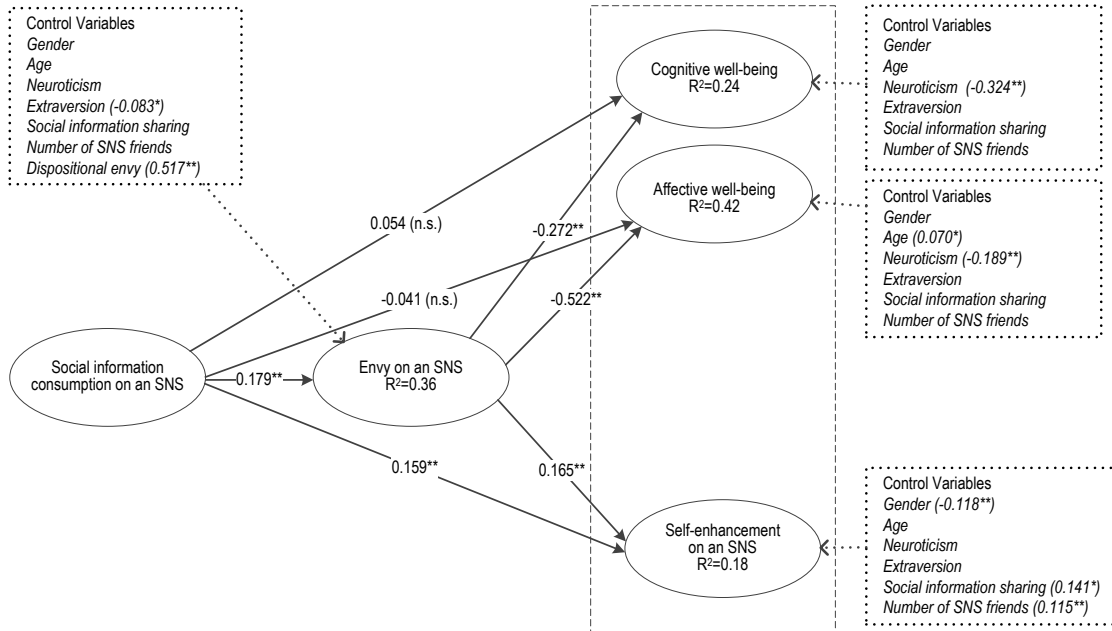
Construct	AWB	Age	CWB	DE	ENV	Extra	Gender	Neuro	NuFr	SE	SIC	SIS
Affective well-being (AWB)												
Age	0.151											
Cognitive well-being (CWB)	0.375	-0.010										
Dispositional envy (DE)	-0.651	-0.115	-0.513									
Envy on an SNS (ENV)	-0.688	-0.104	-0.418	0.646								
Extraversion (Extra)	0.192	0.066	0.229	-0.186	-0.178							
Gender	0.095	0.095	0.034	-0.102	-0.077	-0.134						
Neuroticism (Neuro)	-0.479	-0.092	-0.545	0.620	0.396	-0.381	-0.233					
Number of friends on an SNS (NuFr)	-0.012	-0.137	0.106	-0.025	0.005	0.366	0.017	-0.157				
Self-enhancement on an SNS (SE)	-0.121	-0.093	0.083	0.150	0.281	0.124	-0.140	0.107	0.228			
Social information consumption on an SNS (SIC)	-0.219	-0.050	-0.032	0.085	0.277	0.138	0.003	0.070	0.304	0.374		
Social information sharing on an SNS (SIS)	-0.135	0.040	-0.053	0.027	0.167	0.162	0.083	0.030	0.277	0.331	0.661	

Table C.4: Path Coefficients and Significance Levels for Control Variables

Control Variable → Construct	Envy on an SNS	Cognitive Well-being	Affective Well-being	Self-enhancement on an SNS
Social information sharing on an SNS	0.045	-0.009	-0.044	0.218**
Age	-0.026	-0.053	0.071**	-0.048
Dispositional envy	0.516**	-	-	-
Extraversion	-0.085**	0.053	0.051	0.046
Gender	-0.033	-0.041	0.017	-0.120**
Neuroticism	0.021	-0.324**	-0.189**	0.023
Number of friends on an SNS	-0.020	0.034	-0.030	0.137**

Note: "Affective well-being" was operationalized as "Sadness on an SNS" (items were reversed prior to evaluation).
Significance: * at 5%; ** at 1% or lower

Appendix D



Note: The construct *cognitive well-being* was operationalized as “*satisfaction with life*”; the construct *affective well-being* was operationalized as “*sadness on an SNS*” (items were reversed prior to evaluation).

*Significant at 5%; **significant at 1% or lower; n.s. – not significant.

Figure D.1: Structural Model Including Direct Paths

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