

Narcissism and Emotional Contagion: Do Narcissists “Catch” the Emotions of Others?

Anna Z. Czarna^{1,2}, Monika Wróbel³, Michael Dufner⁴,
and Virgil Zeigler-Hill⁵

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Abstract

In this research, we investigated the association between narcissism and one central aspect of empathy, susceptibility to emotional contagion (the transfer of emotional states from one person to another). In a laboratory study ($N = 101$), we detected a negative link between narcissism and emotional contagion in response to experimentally induced positive affect. In an online study ($N = 195$), narcissism was negatively linked to experimentally induced emotional contagion regardless of valence. These findings indicate that individuals with high narcissism levels are apparently less prone to emotional contagion than individuals lower in narcissism. Hence, narcissists are less likely to “catch the emotions” of others. Furthermore, by comparing experimental assessments of susceptibility to emotional contagion with subjective self-reports, we were able to study self-insight. Across both samples, self-insight was generally low, and individual differences in self-insight were unrelated to narcissism.

Keywords

narcissism, empathy, emotional contagion, mood

The notion that narcissistic individuals lack empathy is present in virtually all modern theories of narcissism, regardless of whether they stem from the fields of social, personality, or clinical psychology (e.g., Kernberg, 1985; Morf & Rhodewalt, 2001; Ritter et al., 2011; Watson, Grisham, Trotter, & Biderman, 1984). Accordingly, next to a strong self-focus, a positive self-view, and feelings of entitlement, low empathy is considered to be a defining aspect of trait narcissism (Campbell & Miller, 2011). Yet, experimental research that examines the actual empathic reactions of narcissistic individuals in the laboratory is rare. In the current investigation, we aimed to fill this gap in the literature by conducting two experimental studies that tested the association between narcissism and one central aspect of empathy, proneness to emotional contagion.

Emotional contagion describes the transfer of emotional states from one person to another. In combination with the cognitive capacity to correctly infer mental states, susceptibility to emotional contagion constitutes a key (emotional) aspect of empathy (Carré, Stefaniak, Ambrosio, Bensalah, & Besche-Richard, 2013; Davis, 1983; Decety & Moriguchi, 2007). Emotional contagion occurs in many social contexts including, for example, interactions between parents and infants, employers and employees, and roommates (Anderson, Keltner, & John, 2003; Hatfield, Cacioppo, & Rapson, 1994). Yet, even though the transfer of emotional states is a widespread phenomenon, there are individual differences in the susceptibility to emotional contagion, such that some people are more prone to “catch” the feelings of others (Dimberg & Lundqvist, 1990;

Hietanen, Surakka, & Linnankoski, 1998). Given that narcissistic individuals have a strong self-focus and a tendency toward self-absorption (Campbell & Miller, 2011; Emmons, 1984), it seems likely that they pay comparatively little attention to the emotional states of other persons. Accordingly, narcissists should be less prone to emotional contagion than individuals lower in narcissism.

But would such a pattern be detectable with self-reports of susceptibility to emotional contagion? Research has shown that self-insight into emotional processes is limited (Wilson & Wilson, 2009) and that correlations between objectively assessed and self-reported indicators of complex emotional processes are often low to insignificant (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Doherty, 1997; Zhou, Valiente, & Eisenberg, 2003). Therefore, we consider self-reports about one’s general proneness to emotional contagion

¹Institute of Psychology, Faculty of Philosophy, Jagiellonian University, Krakow, Poland

²Institut für Psychologie, Universität Bern, Switzerland

³Institute of Psychology, University of Łódź, Łódź, Poland

⁴Institute of Psychology, University of Leipzig, Leipzig, Germany

⁵Department of Psychology, Oakland University, Rochester, MI, USA

Corresponding Author:

Anna Z. Czarna, Institute of Psychology, Faculty of Philosophy, Jagiellonian University, Al. Mickiewicza 3, 31-120 Krakow, Poland.

Email: anna.czarna@vp.pl

a rather inappropriate means for detecting narcissists low, objective proneness. As a consequence, narcissism should not be negatively linked to self-reported proneness to emotional contagion.

Finally, we addressed the question of whether self-insight in terms of proneness to emotional contagion—which can be operationalized through convergence of discrepancies between self-reported proneness to emotional contagion and actual proneness to emotional contagion—might be particularly poor among narcissists. So far, evidence concerning self-insight has been mixed with some results indicating that narcissistic individuals tend to lack self-insight and see themselves more positively than is warranted by objective criteria (Dufner et al., 2012; Gabriel, Critelli, & Ee, 1994; John & Robins, 1994), whereas other results suggest that narcissistic individuals have rather accurate views of themselves regarding their trait standing relative to others (e.g., Carlson, 2012; Carlson, Vazire, & Oltmanns, 2011; Konrath, Meier, & Bushman, 2014). Narcissistic self-enhancement mainly takes place in the agentic domain (Campbell & Foster, 2007). As susceptibility to emotional contagion has a communal basis, we assumed that narcissistic self-enhancement should not play a major role and that accordingly narcissistic individuals should be no less accurate than others with regard to their susceptibility to emotional contagion.

The Current Research

The goal of this research was to clarify the association between narcissism and susceptibility to emotional contagion. To accomplish this goal, we conducted two experimental studies in which we focused on objective assessment of actual emotional contagion. In both studies, we used video material, which has the advantage that a standardized and validated procedure can be implemented that leaves little room for confounding factors (Hess & Blairy, 2001; Hsee, Hatfield, Carlson, & Chemtob, 1990; Hsee, Hatfield, & Chemtob, 1992; McHugo, Lanzetta, Sullivan, Masters, & Englis, 1985; Papousek, Freudenthaler, & Schuler, 2008, Stel & Vonk, 2009). In addition, we assessed self-reported susceptibility to emotional contagion with an established questionnaire. We hypothesized that narcissism would be negatively linked to actual emotional contagion, but that it may have no relationship with self-reported contagion. Furthermore, we hypothesized that no association exists between narcissism and self-insight in terms of emotional contagion.

Study 1

As a measure of actual emotional contagion in Study 1, we tested the extent to which the emotional states of individuals changed in response to emotionally laden movie clips. We also used the Emotional Contagion Scale (ECS) and investigated the associations between actual emotional contagion and self-reported susceptibility to it. As a test of the self-insight hypothesis, we further checked whether narcissism moderated this association.

Method

Participants and Procedure

Participants were a convenience sample consisting of 101 community members (54 women and 47 men) between the ages of 20 and 59 ($M = 27.46$; $SD = 6.77$). They were recruited via e-mailing lists, advertisements on social networking websites, word-of-the-mouth advertising, and flyers. They were informed that the study concerned “accuracy of intuition” and involved measurements of personality. In return for participation, they received feedback on their personality features.

Upon arrival at the laboratory, participants completed measures of narcissism and self-reported susceptibility to emotional contagion. Then, they were randomly assigned to either a positive emotional contagion condition or a negative emotional contagion condition. Participants in both conditions were asked to complete a mood scale (in combination with other irrelevant scales¹ that were included to disguise the true purpose of the present research) and then watched one of two 3-min videos. The videos were developed to be emotionally contagious and were validated by previous research (Wróbel, 2009a; Królewski & Wróbel, in press). They presented a man who had been primed with either positive or negative emotional photographs (according to the experimental condition) that were taken from the International Affective Picture System (Lang, Bradley, & Cuthbert, 1999) prior to recording. For the recording, the man had been instructed to look into the camera and recall and think about the most positive or most negative events in his life (again according to the experimental condition). Previous research (Wróbel, 2009a) has shown that independent raters were able to judge the emotional state expressed on the videos (positive vs. negative affect) correctly, such that the mood in the positive video was rated to be more positive than the mood in the negative video. The exact ratings were as follows: Independent judges rated the mood of the presented person as 4.93 out of 5-point scale for the positive video, and 1.33 of the same scale for the negative video (and the video-taped man rated his mood on a scale ranging from zero to seven as follows: 7 for the positive video and 1.5 for the negative video). After watching the appropriate video, participants were asked to use their “intuition” and guess the man’s age, profession, level of income, and marital status in order to maintain the cover story. Then, participants were asked to complete the same mood scale they had completed prior to watching the video.

Measures

Narcissism. We assessed narcissism using the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The validated Polish version of the NPI (Bazińska & Drat-Ruszczak, 2000) consists of 34 items (e.g., I like to be the center of attention) and responses for each item are provided using scales that range from 1 (*does not apply to me*) to 5 (*applies to me*). Items were summed to create an index of grandiose narcissism ($\alpha = .90$, $M = 104.16$, $SD = 17.62$).

Experimental index of actual susceptibility to emotional contagion. Participants completed the General Mood Scales (GMS; Wojciszke & Baryła, 2005) before and after watching the video. The GMS has two 4-item equivalent versions (version A and version B) which are meant to be used as repeated measures of current mood. The scale is unidimensional and ranges from negative to positive mood (with higher values indicating more positive mood). Participants completed version A of the GMS before watching the video and version B after watching the video. In order to allow for an assessment of subtle mood changes, we modified the response scale of the GMS from its typical 5-point response format to a 9-point format that ranged from 1 (*I disagree*) to 9 (*I agree*). Internal consistency of the GMS was good ($\alpha_{\text{version A}} = .84$, $M = 6.27$, $SD = 2.11$, and $\alpha_{\text{version B}} = .77$, $M = 6.47$, $SD = 1.94$).

We conceptualized emotional contagion as a change of mood in accordance with experimental manipulation (i.e., an increase of mood in the positive emotional contagion condition and a decrease of mood in the negative emotional contagion condition). Our index of emotional contagion was a ratio of participants' mood at the end of the study divided by the mood at the start of the study minus 1. A value of 0 would therefore indicate no change in mood, a value greater than 0 would indicate an increase in positive mood, and a value lesser than 0 would indicate a decrease in positive mood. For ease of interpretation, we multiplied the remaining score by -1 in the negative emotional contagion condition. This procedure had the advantage that in both conditions, values greater than zero indicate a mood change that corresponds with the experimental manipulation (i.e., emotional contagion).

Self-reported susceptibility to emotional contagion. We assessed self-reported emotional contagion with the validated Polish version of the ECS (Doherty, 1997; Polish version: Wróbel, 2009b). The ECS is a 15-item instrument that measures individual differences in the tendency to catch the emotional states of other people (1 = *not at all* to 5 = *always*). The items are summed to create two subscales: a positive contagion subscale (6 items concerning susceptibility to transfer of happiness and love, e.g., Being around happy people fills my mind with happy thoughts; $\alpha = .78$, $M = 24.32$, $SD = 3.82$) and a negative subscale (9 items concerning susceptibility to transfer of anger, sadness and fear, e.g., If someone I'm talking with begins to cry, I get teary-eyed; $\alpha = .76$, $M = 26.43$, $SD = 6.49$). In addition to the two subscales, there is an overall index of susceptibility to emotional contagion ($\alpha = .81$, $M = 50.75$, $SD = 8.85$).

Results

Did participants' mood change in reaction to the experimental manipulation? We used t -tests to address this question. A t -test against a reference mean indicating no mood change ($M_{\text{reference}} = 0$) revealed that mood changed significantly and in accordance with experimental manipulation in the positive emotional contagion condition, $t(50) = 2.84$, $p < .01$; $M_{\text{positive}} = .16$, $SD_{\text{positive}} = .40$. However, mood remained

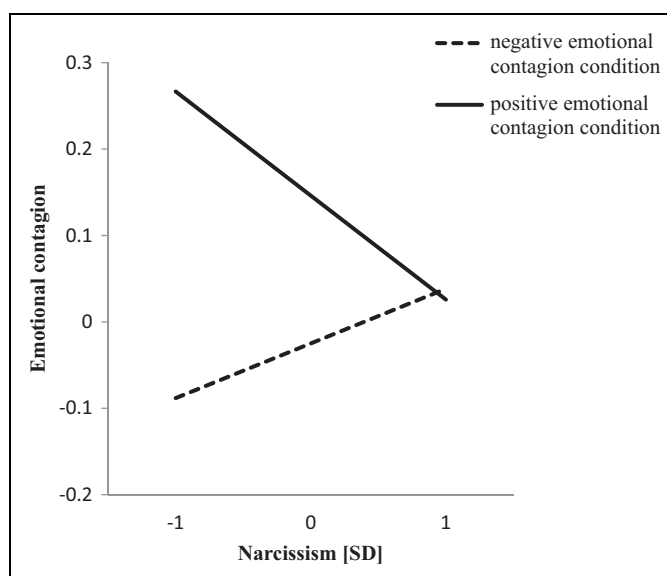


Figure 1. Predicted values for emotional contagion illustrating the interaction of narcissism and experimental condition in Study 1. Only the slope for positive emotional contagion was significant. Emotional contagion was coded such that more positive scores reflect more actual emotional contagion, regardless of the condition.

unchanged in the negative emotional contagion condition, $t(49) = -.47$, $p = .64$; $M_{\text{negative}} = -.02$, $SD_{\text{negative}} = .26$. The two conditions also differed significantly in terms of mood change ($t = 2.51$, $p = .01$).

We then addressed the relation between narcissism and emotional contagion. We ran a regression analysis with (standardized) narcissism and dummy-coded and centered experimental condition entered as main effects as well as the interactive product of the two. The outcome was emotional contagion. The results showed that emotional contagion was significantly predicted by the interaction between narcissism and experimental condition ($b = -.18$, $SE = .07$, $\beta = -.26$, $t = -2.77$, $p < .01$). Simple slope analyses revealed that narcissism significantly predicted low emotional contagion in the positive emotional contagion condition ($b = -.12$, $SE = .05$, $t = -2.65$, $p < .01$) but not in the negative emotional contagion condition ($b = .06$, $SE = .05$, $t = 1.31$, $p = .19$; see Figure 1).

We found that narcissism was correlated with baseline mood (Table 1, top panel) for participants in the positive emotional contagion condition but not participants in the negative emotional contagion condition. Therefore, we addressed the possibility that differences in baseline mood may account for the negative association between narcissism and emotional contagion in the positive emotional contagion condition. To this end, we ran a regression analysis with narcissism as a predictor variable, baseline mood as a covariate, and emotional contagion as the criterion variable for those participants assigned to the positive emotional contagion condition. The results showed that including baseline mood in this model reduced the magnitude of the negative association between narcissism and emotional contagion in the positive emotional contagion condition ($b = -.03$, $SE = .04$, $\beta = -.07$, $t = -0.76$, $p = .45$).

Table 1. Zero-Order Correlations Between Narcissism and Mood in Studies 1 and 2.

		Narcissism
Study 1		
Positive emotional contagion condition	GMS_baseline_mood	.31*
	GMS_mood_after_manipulation	.13
Negative emotional contagion condition	GMS_baseline_mood	.15
	GMS_mood_after_manipulation	-.06
Study 2		
Positive emotional contagion condition	GMS_baseline_mood	.14
	PANAS Positive Affect	.47**
	PANAS Negative Affect	.19 [†]
	GMS_mood_after_manipulation	.03
Negative emotional contagion condition	GMS_baseline_mood	.12
	PANAS Positive Affect	.50**
	PANAS Negative Affect	.01
	GMS_mood_after_manipulation	.17 [†]

Note. GMS = General Mood Scale; PANAS = Positive and Negative Affect Schedule.

** $p < .01$. * $p < .05$. [†] $p < .09$.

Table 2. Correlations Between Narcissism and Self-Reported Susceptibility to Emotional Contagion in Studies 1 and 2.

Scale	Narcissism	ECS Total	ECS Negative Mood
Study 1			
Narcissism			
ECS Total	.02		
ECS Negative Mood	-.12	.92***	
ECS Positive Mood	.26**	.75***	.44***
Study 2			
Narcissism			
ECS Total	-.06		
ECS Negative Mood	-.10	.93**	
ECS Positive Mood	.01	.81**	.54**

Note. ECS = Emotional Contagion Scale.

*** $p < .001$. ** $p < .01$. * $p < .05$.

Finally, we investigated the link between narcissism and self-reported susceptibility to emotional contagion. As shown in Table 2 (top panel), narcissism was positively correlated with self-reported susceptibility to positive emotional contagion. Next, we addressed self-insight concerning proneness to emotional contagion. The correlation between actual and self-rated proneness to emotional contagion was insignificant, $r = -.04$, $p = .68$, indicating that generally, self-insight was low. Then, we ran a moderation analysis with self-reported susceptibility to emotional contagion (measured with the ECS) as a predictor variable, narcissism as a moderator variable, and actual emotional contagion as the criterion variable. The analysis yielded no significant effects. Hence, individuals with high levels of narcissism were no better or worse than others with regard to their insight into their susceptibility to emotional contagion.

Discussion

Narcissism appeared to predict low actual emotional contagion in the positive emotional contagion condition. No significant effects were present in the condition testing contagion with negative emotions. An opposite pattern of results was present for self-reported proneness to emotional contagion: Individuals with high levels of narcissism believed that they were more prone to emotional contagion of positive emotions. In line with our hypothesis, no association existed between narcissism and self-insight in terms of emotional contagion.

Even though the findings from Study 1 provided first support for the hypothesis that narcissists may indeed be less prone to emotional contagion than persons lower in narcissism, several questions were left open. First, the negative association between narcissism and emotional contagion decreased substantially when we controlled for differences in baseline mood. This finding indicates that the original effect may have been due to individual differences in general affect. Second, narcissism was solely negatively linked to proneness to emotional contagion in the positive mood condition, whereas we had expected a main effect that is irrespective of mood content. To test the trustworthiness of the current findings and to explore these issues more thoroughly, we ran a replication study. This study included a larger sample and a slightly different procedure. We asked participants in Study 1 to complete some irrelevant measures¹ following the baseline mood measurement in order to disguise the true purpose of the study. We removed these unnecessary instruments from Study 2 because it is possible that completing them may have contributed to mood change in a way that was unrelated to the manipulation itself and thus may have led to artifactual results. Finally, we employed an additional measure of baseline mood in order to gain a better understanding of the role that baseline mood plays in the connection between narcissism and emotional contagion.

Study 2

We used the same experimental manipulation as in Study 1 to elicit emotional contagion but eliminated all irrelevant instruments that had appeared between the first mood assessment and experimental manipulation in Study 1 from the procedure. Furthermore, we included the Positive and Negative Affect Schedule (PANAS) as another measure of baseline mood in addition to the GMS.

Method

Participants and Procedure

A convenience sample consisting of 214 community members participated in the online study. Participants were recruited via e-mailing lists, advertisements on social networking websites, and snowball advertising. The cover story and incentives were the same as in Study 1. Data from 19 participants were excluded due to suspicion about the true purpose of the study.

These excluded participants were younger than the final participants ($M = 23.21$; $SD = 3.77$, $t = 2.56$, $p = .01$), but they did not differ on any other variables. The final sample consisted of 195 participants (139 women and 56 men) between the ages of 17 and 59 years ($M = 27.41$; $SD = 7.03$).

Upon entering the website, participants completed measures of narcissism and self-reported susceptibility to emotional contagion. Then, they were randomly assigned to either a positive emotional contagion condition or a negative emotional contagion condition. Participants in both conditions were asked to complete the same mood scale (GMS) used in Study 1 as well as a Polish version of the PANAS (Brzozowski, 2010) as an additional measure of baseline affect before watching one of the two videos used in Study 1 and using their "intuition" to guess the man's age, profession, income level, and marital status (to maintain the cover story). Participants were then asked to complete the same mood scale (GMS) that they had completed prior to watching the video (as in Study 1) before being probed for suspicion about the true purpose of the study and debriefed.

Results

A t -test against a reference mean indicating no mood change ($M_{\text{reference}} = 0$) revealed a marginally significant mood change in accordance with experimental manipulation in the negative emotional contagion condition, $t(106) = -1.86$, $p = .07$; $M_{\text{negative}} = -.26$, $SD_{\text{negative}} = 1.43$. In the positive condition, mood change was in the expected direction but not significant, $t(87) = 1.07$, $p = .29$; $M_{\text{positive}} = .15$, $SD_{\text{positive}} = 1.31$. The two conditions differed significantly in terms of mood change ($t = 2.04$, $p = .04$).

We then addressed the association between narcissism and actual emotional contagion. We ran a regression analysis with (standardized) narcissism and dummy-coded and centered experimental condition entered as main effects as well as the interactive product of the two. The outcome was emotional contagion operationalized in an identical way as in Study 1. There was a main effect of narcissism on emotional contagion ($b = -.04$, $SE = .02$, $\beta = -.15$, $t = -2.03$, $p = .04$). No other effects were statistically significant (experimental condition: $b = .03$, $SE = .04$, $\beta = .06$, $t = 0.83$, $p = .41$; Experimental Condition \times Narcissism interaction: $b = .00$, $SE = .04$, $\beta = .00$, $t = 0.02$, $p = .98$). These results suggest that high levels of narcissism were associated with low levels of emotional contagion regardless of the condition.

We then tested separately across and within conditions whether baseline mood accounted for the association between narcissism and emotional contagion. Narcissism was marginally related to baseline mood measured with the GMS (see Table 1, bottom panel) and significantly related to baseline positive affect measured with the PANAS. We ran the same regression as the one described previously but included baseline mood as well as an interaction effect of Baseline Mood \times Condition as covariates. We conducted separate analyses using GMS and PANAS positive affect and PANAS negative affect

as baseline mood measures (we controlled for one mood measure at a time). The results showed that controlling for these three indicators of baseline mood did not alter the results for narcissism or the interaction term of Narcissism \times Condition. Hence, differences in baseline mood did not account for the link between narcissism and proneness to emotional contagion.

Finally, we found no significant correlations between narcissism and self-reported emotional contagion (Table 2 bottom panel). What is more, experimental emotional contagion was uncorrelated to self-reported emotional contagion ($r = -.05$, $p = .54$) and narcissism was not a significant moderator of the relationship between self-reported and experimental emotional contagion ($b = -.01$, $SE = .02$, $\beta = -.04$, $t = -0.59$, $p = .56$). Therefore, individuals with high levels of narcissism were not more or less accurate in their self-report concerning proneness to emotional contagion than individuals with low levels of narcissism.

Discussion

In this study, narcissism was negatively linked to actual emotional contagion across conditions. Differences in baseline mood did not account for this effect. There was no relation between narcissism and self-report susceptibility to emotional contagion and we detected no indication that self-insight in terms of emotional contagion was particularly poor among narcissists.

General Discussion

The current research is the first to demonstrate that individuals with high levels of narcissism lack a crucial aspect of empathy: susceptibility to emotional contagion. We used an experimental procedure and showed that narcissistic individuals are less likely to catch affect exhibited by another person. We detected the hypothesized negative effect of narcissism on emotional contagion for positive affective contagion in Study 1 and for overall contagion in Study 2. Hence, the current findings are in line with earlier research demonstrating a negative link between narcissism and self-reported trait empathy (e.g., Watson et al., 1984; Watson, Little, Sawrie, & Biderman, 1992). The present findings extend those of earlier studies, however, by demonstrating that individuals' actual, directly assessed empathic reactions are a function of narcissism.

Correlations between actual and self-reported susceptibility to emotional contagion were insignificant in both studies, again indicating that self-insight into complex emotional reactions is limited (Wilson & Wilson, 2009). Accordingly, it is unsurprising that the negative association between narcissism and emotional contagion could not be detected with self-report measures. This finding underlines the importance of experimental designs that allow repeated assessment of emotional states. Finally, narcissism did not moderate the association between actual and self-reported susceptibility to emotional contagion, suggesting that narcissistic individuals are no more or less accurate in their self-knowledge concerning their

prone to emotional contagion. The latter result corroborates earlier evidence that despite their propensity to self-enhance concerning their agentic qualities, narcissistic individuals do not generally lack self-knowledge (e.g., Carlson, 2012; Carlson et al., 2011; Konrath et al., 2014).

Despite the contributions to literature, the current research is not without limitations. The experimental method we used enabled proper control of possible confounding factors, yet ecological validity is restricted. Future research might combine experimental approaches with more realistic real-life settings. More representative sampling of targets (including male and female targets to allow for a systematic test of gender differences instead of one videotaped man) and more representative sampling of emotional states within targets would benefit future research. Furthermore, our approach relied exclusively on self-reported assessments of affect. Even though we do not doubt that self-report is a valuable source of information about one's own emotional experiences, it might be supplemented with other methods for capturing affective reactions in future studies, such as physiological measures or video recordings of facial expressions for subsequent emotion coding.

In spite of the new insights provided by the current research, a number of lingering questions remain concerning the link between narcissism and empathic reactions: Is narcissists' lacking susceptibility a major reason for their generally low empathy? Do narcissists show little empathy in some, or all social interactions? Does the emotional contagion they show differ across situations, depending on the context and the motivational forces present within an interaction? Are narcissists more susceptible to emotional contagion when they are motivated, that is, when it suits their ultimate goal to garner narcissistic supply (admiration, adoration, etc.)? We hope that future research will address these questions.

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Note

1. The irrelevant scales were the Rosenberg Self-Esteem Scale and the Bem Sex Role Inventory.

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Author Biographies

Anna Z. Czarna is a postdoctoral fellow and a principal investigator at the Jagiellonian University in Krakow, Poland. Her interests include dark personality features and their social, interpersonal, affective, and cognitive correlates and consequences.

Monika Wróbel is an assistant professor at the University of Lodz, Poland, with an interest in the social functions of emotions. Her work focuses primarily on emotional contagion and emotional labor.

Michael Dufner is a principal investigator (Akademischer Rat a. Z.) at the University of Leipzig, Germany. His research deals with the interplay between self-perception and social realities and with the role of affective processes in implicit motive dispositions.

Virgil Zeigler-Hill is an associate professor of Social-Personality Psychology at the Oakland University. His research interests include dark personality features (e.g., narcissism), self-esteem, and interpersonal relationships.