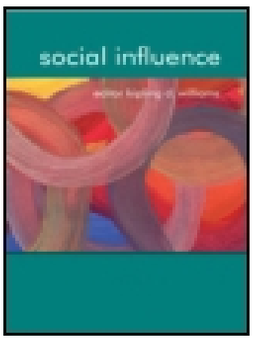

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The lonely bystander: ostracism leads to less helping in virtual bystander situations

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ABSTRACT

People are less likely to help when they have been ostracized, or when they are in the presence of bystanders. In the current manuscript we test both these influences simultaneously. We postulated two opposing hypotheses: first, helping decreases after ostracism, even when intervention is already less likely due to bystander presence. Second, the bystander effect could be reversed, as helping may benefit one's reputation, especially in the presence of others. After playing Cyberball to manipulate ostracism, participants could help others on either a crowded or empty internet forum. In support of the first hypothesis, we found two main effects: replicating the bystander effect, the presence of others diminished helping. Moreover, ostracism diminished helping, even in the presence of others.

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Bystander intervention; helping behavior; ostracism; social exclusion; bystander effect

After wandering away from her mother, a two-year-old girl got run over by a van at a busy market street in China. The driver of the van ignored it and drove off. As the girl lay on the ground, clearly in agony, many passers-by also ignored her suffering. Another car even drove over her, as if she was invisible, or simply did not exist. It took over seven minutes before someone finally offered help (Chin, 2011). Research identified the presence of other bystanders as one of the most important influences which causes people to fail to provide help to those in need (Latané & Nida, 1981). However, recent research also shows that other social influences can help us understand why people sometimes do not help others, for instance, feeling ostracized or socially excluded (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007). In the present study, we expand on these findings and examine if these two negative influences on helping behavior can occur independently from each other.

The Bystander effect

The presence of others diminishes helping in criminal situations (van Bommel, van Prooijen, Elffers, & van Lange, 2014) and accidents (Latané & Darley, 1968), but it also influences

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more common behaviors like donating to charity (Garcia, Weaver, Moskowitz, & Darley, 2002), and giving support on an online forum (van Bommel, van Prooijen, Elffers, & Van Lange, 2012). This became known as the bystander effect, and emerged as one of the most robust phenomena in social psychology (Fischer et al., 2011; Latané & Nida, 1981), thus when studying prosocial behavior—especially helping behavior—it may be fruitful to take the presence of others into account.

Some underlying psychological processes involved in the bystander effect are indirectly related to fears of being ostracized or excluded. For instance, the process of audience inhibition describes that people are afraid to stand out by helping when no one else helps, as they fear to look foolish (Tice & Baumeister, 1985), and people who feel generally more easily embarrassed are slower to help out a person by pointing out a flaw (Zoccola, Green, Karoutsos, Katona, & Sabini, 2011). Likewise, people are afraid to intervene as they fear that other bystanders think they are responsible for causing the problem in the first place (Cacioppo, Petty, & Losch, 1986). In short, people fear that intervention may harm their reputation and consequently increase the likelihood of being socially rejected or even ostracized, as ostracism is often used to control people who display harmful, undesirable, or otherwise deviant behaviors (Nezlek, Wesselmann, Wheeler, & Williams, 2015; Williams, 2007)

Ostracism

Ostracism and social exclusion refer to social behavior where someone is being ignored and or even physically excluded from the group (Williams, 2007; see also Bernstein & Claypool, 2012). Typically, a social exclusion manipulation in the lab consists of either giving false feedback on a personality test, stating that the participant will likely live a lonely life (Baumeister, Twenge, & Nuss, 2002), whereas an ostracism manipulation is often implemented by a virtual ball tossing game (e.g., Cyberball; Williams, Cheung, & Choi, 2000). When the ball tossing game is used to study ostracism, after a few trials, the participant will be either completely ignored by others, receive the ball an equal number of times compared to the others, or receive the ball virtually all the time (e.g., van Beest & Williams, 2006; Williams et al., 2000).

Despite the different approaches of both laboratory paradigms, a similar negative outcome is that ostracism has serious negative effects on the ostracized individual. Indeed, ostracism impedes important basic needs, and it impacts the way people perceive the world and themselves. For instance, people often feel their need to belong is thwarted, experience lower levels of meaningful existence, feel that they are not in control anymore, and experience low self-esteem (Williams, 2007).

Ostracism and the bystander effect

Ostracism and social exclusion have such an impact on people, it may even influence the robust bystander effect. We propose two alternative hypotheses. First, because ostracism can make people feel "numb" (DeWall & Baumeister, 2006), it could decrease helping in general (see also Twenge et al., 2007) even though helping is already less likely due to the presence of others. On the other hand, ostracized individuals may use the opportunity of helping to overcome the negative outcomes of being ostracized, especially when other bystanders are present. In the following sections we will elaborate on both possibilities.

Ostracism leads to less helping

Previous research indicated that ostracism and social exclusion activate a set of bodily responses that reduce both physical and emotional pain (DeWall & Baumeister, 2006). Not only the current emotions are reduced, ostracized, or excluded people may also anticipate fewer positive (pride, joy) and negative (guilt, shame) emotions which ordinarily motivate people to help or not. Moreover, they may be less likely to empathize with people's emotional or physical problems (DeWall & Baumeister, 2006). Recent research provided evidence that socially excluded and ostracized individuals indeed provide less support to those in need (Twenge et al., 2007). For instance, after being excluded, people were less likely to donate to charity.

Related to this notion of reduced anticipated emotion, social exclusion and ostracism may lead people to feel less trust (Twenge et al., 2007), which is very important for cooperative behavior and interaction (Balliet & Van Lange, 2013). For instance, when people are motivated to help due to anticipated reciprocation (see, Rand, Greene, & Nowak, 2012), they need to trust that their investment of helping will eventually be paid back.

Ostracism leads to more helping

On the other hand, ostracism could lead to more helping when others are around. Research indicates that people underestimate the feeling of being ostracized, until they experience it themselves (Nordgren, Banas, & MacDonald, 2011). Being in need and not receiving help from bystanders who are capable of giving it may be a very similar experience to ostracism (see Flaspohler, Elfstrom, Vanderzee, Sink, & Birchmeier, 2009) and thus, will elicit more empathy from someone who has just been ostracized.

Although previous research shows that helping behavior in general actually declines when people are socially excluded (Twenge et al., 2007), this may be different when there are bystanders present. For instance, because ostracized individuals try to bolster their self-esteem by engaging in bravado (Williams et al., 2002), they may act against what the other bystanders do, and thus help a person in need. In addition, people who think that others have a low opinion of them, because they have recently been ostracized, may use helping as means of impression management (e.g., Hopkins et al., 2007; Williams & Sommer, 1997). It stands to reason that helping is much more effective as a form of reputation management when many people are around, which could make helping a very appealing option for ostracized individuals in the presence of bystanders (van Bommel et al., 2012, 2014).

To summarize, because ostracized individuals may empathize more with a person in need in a bystander situation, helping in general may increase. Moreover, the bystander effect could be attenuated or reversed, as ostracized individuals may be keen to obtain a good reputation, which is more efficient in the presence of others.

Present study

In the current study, we conducted a first test of how a recently experienced state of ostracism influences the intervention behavior of people when they encounter someone in need. For this we used the Cyberball paradigm to create three levels of social inclusion, namely ostracism, proportional inclusion, and over-inclusion. To measure the amount of help given, participants read messages of others in emotional distress, on a crowded or empty internet forum—a procedure which can be used to assess the bystander effect online (van Bommel et al., 2012).

Table 1. Differences in response rates between forum messages.

			95% Confidence interval	
Forum message	Response rate	Std. error	Lower bound	Upper bound
Depression	.399	.042	.316	.481
Cancer	.319	.040	.240	.398
Anorexia	.312	.040	.233	.390
Quarter-life crisis	.399	.042	.316	.481
Break up	.312	.040	.233	.390

Note. Forum messages were presented in random order.

Method

Participants and design

In the present study, 138 participants were randomly assigned to one of the six conditions in our 2 (Bystanders: None vs. 30) × 3 (Social inclusion: Ostracism vs. proportional inclusion vs. over-inclusion) between participants factorial design. This sample size provides 80% power to detect a main effect of ostracism, and an interaction between ostracism with bystander presence with an effect size $f = .27$, and a main effect of bystander presence of $f = .24$, which are generally considered medium effect sizes (see, Faul, Erdfelder, Lang, & Buchner, 2007; for the bystander effect one could expect a larger effect size for an experimental study with no active bystanders. see Fischer et al., 2011). For their participation, participants received €2.50 (roughly $3 in American currency) or course credits.

Procedure and materials

Participants were invited to join a study consisting of two parts. Upon arrival, they were seated in separate cubicles with a computer on which the materials were presented. At the start of the experiment, the experimenter asked participants for their full names and email address, in order to make a supposedly real account for an Internet forum.

The first part of the experiment contained the Cyberball paradigm (see Williams & Jarvis, 2006). In this paradigm, participants play virtual a ball tossing game with two other people. The behaviors of the two other people were pre-programmed responses. In the ostracism condition, participants received the ball the first three times, but then were ostracized by the other players. In the proportional inclusion condition, participants received the ball about 33% of the time, and in the over-inclusion condition 80%.

The second part of the experiment was presented as independent from the first part (i.e., the people who supposedly played the Cyberball game were different from the people in this part of the experiment). Participants were instructed to read messages on an ostensibly real Internet forum, and reply to these if they wanted (van Bommel et al., 2012). Depending on the condition, we presented the forum as currently visited by many people (around 30 current visitors), or as a relatively quiet forum (0 current visitors). The messages supposedly were selected by the computer, and would all be new messages which had not (yet) received a response. After a short reading time, participants could choose to reply, or simply skip to another message, until a total of five messages were read.

Each message was presented in random order, and was around the same number of characters ($M = 1262$, SD = 22.52). One message was written by a person who was severely

Table 2. Means and standard deviations of the fulfillment of the four needs per type of social exclusion.

	Exclusion		Proportional inclusion		Over-inclusion	
	Mean	SD	Mean	SD	Mean	SD
Belonging	2.23	0.94	4.57***	1.39	4.99†	1.07
Control	2.73	1.02	4.62***	1.48	5.29**	0.98
Self-esteem	4.01	1.33	5.31***	1.30	5.82*	0.82
Meaningful existence	3.07	1.03	5.39***	1.21	5.34	1.18

†$p < .10$; *$p < .05$; **$p < .01$; ***$p < 0.001$, values based on contrast analyses with the contrast set to compare the value in the previous column.

depressed. Another was from a person who just found out her partner has cancer. One was about someone suffering from anorexia. Another message came from someone in a "quarter life crisis" and did not know what to do with his life. One more message came from someone who had problems with a breakup. The probability of responding for each message was between 31% and 39% on each message (see Table 1). In order to analyze helping behavior, the response rates on the five forum messages were summed into one variable ($\alpha = .72$).

Measures

Fundamental needs

After the Cyberball game, participants received a short questionnaire about the four fundamental needs (see, Zadro, Williams, & Richardson, 2004) On each item of this questionnaire, participants could indicate how much they agree with the statement based on a seven point Likert-scale (1 = Completely disagree, 7 = Completely agree)

Belonging was measured by four items (e.g., "I did not feel accepted by the other participants" [reverse scored]). These four items were averaged into one reliable scale ($\alpha = .86$). *Control* consisted of the aggregate of three items (e.g., "I felt in control during the game", $\alpha = .75$). *Self-esteem* was also measured by three items (e.g., "I felt good about myself during the game", $\alpha = .79$). And *meaningful existence* consisted of three items (e.g., "I felt non-existent during the game" [reverse scored], $\alpha = .68$).

Helping behavior

Helping behavior was measured by summing the number of supporting messages participants wrote. This ranged from 0 to 5.

Results

Manipulation checks

We expected that participants in the ostracism condition would experience less need of fulfillment than participants who were included. An analysis of variance (ANOVA) yielded a main effect for social inclusion on Belonging, $F(2135) = 76.41$, $p < .001$, $\omega^2 = .52$; Control, $F(2135) = 57.22$, $p < .001$, $\omega^2 = .45$; Self-esteem, $F(2135) = 28.95$, $p < .001$, $\omega^2 = .29$, and Meaningful-existence, $F(2135) = 61.14$, $p < .001$, $\omega^2 = .47$. Contrast analyses show, as expected, that participants in the ostracism condition felt lower levels of belonging, control, self-esteem, and meaningful existence, than participants who were not ostracized (Table 2).

Table 3. Means and standard deviations of helping behavior per condition.

	Exclusion		Proportional inclusion		Over-inclusion		Overall	
	M	SD	*M*	SD	*M*	SD	*M*	SD
0 Bystanders	1.62	1.69	2.23	1.79	2.25	1.57	2.04	1.68
30 Bystanders	.83	1.31	1.42	1.25	2.13	1.77	1.45	1.53
Overall	1.20	1.53	1.80	1.57	2.19	1.65	1.74	1.63

Helping

First, we expected that people would help less when other visitors were online, than when participants were alone. Indeed, a 2 (bystander presence: absent vs. present) × 3(level of inclusion: ostracism vs. proportional inclusion vs. over-inclusion) ANOVA showed a main effect of bystander presence, as participants helped significantly less in the presence of bystanders ($M = 1.45$, SD = 1.53) than when they were alone ($M = 2.04$, SD = 1.68), $F(1132) = 4.57$, $p = .03$, $\omega^2 = .03$. These findings replicate the classic bystander effect and underscore the validity of an online forum to investigate this phenomenon (cf. van Bommel et al., 2012).

Second, as expected, we found that the level of social inclusion significantly influenced helping behavior, $F(2132) = 4.39$, $p = .01$, $\omega^2 = .05$. Contrast analyses showed that, in line with the view that ostracism makes people less helpful, people in the ostracism condition helped significantly less ($M = 1.20$, SD = 1.53) than people in both inclusion conditions ($M = 2.00$, SD = 1.62), $F(1132) = 7.46$, $p < .01$, $\omega^2 = .04$. Additional analysis shows this is similar when contrasting helping in the ostracism condition to the proportional inclusion condition (albeit marginally; $M = 1.80$, SD = 1.57, $F[1132] = 3.27$, $p = .07$, $\omega^2 = .03$) and the over-inclusion condition ($M = 2.19$, SD = 1.65), $F[1132] = 8.65$, $p < .01$, $\omega^2 = .05$). There was no significant difference in helping between the two inclusion conditions, $F(1132) = 1.28$, $p = .26$, $\omega^2 = .002$. This indicates that the increase in helping of socially included participants cannot be explained by the feelings of conspicuousness.

Lastly, we tested if the bystander effect was moderated by whether or not participants were socially included, or if the negative influence of the presence of others stays the same. The ANOVA did not yield a significant interaction between the presence of bystanders and levels of inclusion on the amount of help given, $F(2132) = .72$, $p = .49$, $\omega^2 < .01$. To obtain 80% power with the observed effect size ($f = .011$) we needed an unrealistically high number of participants (79,629), which may indicate that the non-significant finding was not merely due to low power. This suggests that the influence of bystander presence was similar for each level of social inclusion, and vice versa, the bystander effect may happen independent of the feelings of inclusion that people experience (see also Table 3).

General discussion

The present research was designed to replicate the bystander effect and to provide a first critical test of two competing hypotheses: First, we expected intervention to decrease when people are ostracized, even when they are already less likely to help due to the presence of bystanders. Second, an alternative line of reasoning implied that the bystander effect could be attenuated or reversed, as helping is a good way of obtaining a good reputation, especially in the presence of others. In support of the first hypothesis, we found two main effects: people helped others less in the presence of bystanders, replicating the classic bystander

effect, and—extending the literature on helping behavior—people helped less when they were ostracized than when they were included or over-included.

Moreover, this study is, to our knowledge, the first to directly test if the bystander effect may occur independent of feelings of inclusion. The manipulation of ostracism and bystander presence in the current study yielded clear negative main effects for ostracism and bystander presence on giving social support, but we found no interaction. The negative influence of both ostracism and the presence of others on the willingness to help happened independently of the level of the other.

Certainly, this research does not allow us to provide clear evidence of the mechanisms underlying the present findings. But in terms of a general explanation, we view the present findings as consistent with the notion that ostracized people may feel numb. Numbness is typically encountered in future-life exclusion paradigms, which are rather impactful (Bernstein & Claypool, 2012). It could function as a coping mechanism which makes them less likely to feel the negative emotions that come from having their basic needs thwarted due to social exclusion or ostracism (DeWall & Baumeister, 2006). The ostracism manipulation in the current study may seem less impactful, but still did have a remarkable impact on these needs. We, therefore, reason that future research should look into how numbness may decrease helping behavior in the presence of others. We would like to propose two different psychological mechanisms in particular: both of which were previously suggested as important indicators to whether or not people help during bystander effect situations.

A first possible mechanism is that numbness makes people less capable of empathizing with others: When people do not currently experience (emotional) pain themselves, it often creates an empathy gap in which they underestimate the suffering of others (Nordgren et al., 2011). From research about bystander intervention it became evident that perceived severity of the situation is a significant indicator of whether people help. The more evident the need is, the more likely people are willing to help (e.g., Fischer et al., 2011). A second possible mechanism by which numbness can decrease helping is by changing the cost-reward ratio of helping. To decide whether to help others in need, people often make an (implicit) cost-reward analysis (e.g., Dovidio, Piliavin, Gaertner, Schroeder, & Clark, 1991). Numbness may change the outcome of this analysis to favor non-intervention. DeWall and Baumeister (2006) found evidence that socially excluded people feel less emotion in general. It is possible that this includes peoples' feeling of responsibility (see also Garcia et al., 2002), and positive feelings that often arise from helping another person (such as joy and pride).

Another related process could provide an alternative explanation for our findings. People could, as a mechanism to cope with the ostracism, decide to conserve their cognitive resources to focus on recovering from the negative emotions and effects from ostracism. Instead of putting resources in to helping other people in emotional distress, such as on the forum in this study, people use their cognitive resources to first help themselves.

The bystander effect became well known because of the terrible stories about bystanders failing to intervene during severe crimes and accidents. In this study, we focused on a low-risk situation with a low cost helping behavior. We thought this low threshold may yield more helping behavior. Indeed, looking at the negative influence of ostracism and the presence of others on giving social support, it would be very likely that no one would have helped at all, if the threshold of helping was higher. Moreover, previous research has shown that the processes in this type of situation may be very similar to those of the more classical bystander studies, and helping in such a situation may indeed be viewed as a means to

obtain a good reputation (van Bommel et al., 2012). Lastly, we think it is important to note that the intervention in this study does not reflect mere behavioral intentions, but actual behavior. Participants thought that they were responding to, or ignoring a real person in need. Taken together, the low threshold of helping and the actual measurement of behavior may make the forum paradigm particularly useful for research where the likelihood of helping is not very high.

Concluding remarks

With increasing individualization in certain communities, people may feel more socially isolated (Murie & Musterd, 2004). It is possible that such feelings yield similar outcomes as ostracism, such as a thwarted need to belong, and thus this research suggests that in such communities people may also be less likely to help each other in bystander situations. Above and beyond the number of bystanders, the feelings of isolation may lead people to intervene, support, or help each other less. Certainly, people who needed help and are ignored by others who witnessed their suffering may feel even more isolated than before. Moreover, other bystanders may interpret the inaction as a sign that social isolation or even ostracism is common in this community: They start to perceive their community in terms of a collection of separate individuals, instead of a cohesive community. Taken together, the current research unveils that such events could chain into a vicious cycle of isolation and bystander apathy. It may, therefore be important to prevent people from feeling excluded and promote a sense of community. One way to break such a cycle could be by introducing shared facilities such as parking lots, smoking zones, and gardens.

Decades of research indicated that the bystander effect is a robust phenomenon, and hard to attenuate or reverse (Fischer et al., 2011; Latané & Nida, 1981). It became well known for its detrimental outcome for victims of crimes and accidents; moreover, because it may happen in many areas of peoples' lives, the bystander effect could be considered detrimental for society in general. The threat of social exclusion is often (implicitly) used to benefit society because it increases the likelihood of cooperation (Ouwerkerk, Kerr, Gallucci, & van Lange, 2005). However, once someone feels ostracized, the current research suggests that, just like the bystander effect, it may be hard to reverse or attenuate the negative social consequences, as it makes people feel helpless and less helpful.

Disclosure statement

No potential conflict of interest was reported by the authors.

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