Research article

Combating the mental health stigma with nostalgia[†]

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Abstract

We report research implicating nostalgia as an intrapersonal means of warding off the stigmatization of persons with mental illness. We hypothesized and found that nostalgia about an encounter with a person with mental illness improves attitudes toward the mentally ill. In Experiment 1, undergraduates who recalled an encounter with a mentally ill person while focusing on central (vs. peripheral) features of the nostalgia prototype reported a more positive outgroup attitude. This beneficial effect of nostalgia was mediated by greater inclusion of the outgroup in the self (IOGS). In Experiment 2, undergraduates who recalled a nostalgic (vs. ordinary) interaction with a mentally ill person subsequently showed a more positive outgroup attitude. Results supported a serial mediation model whereby nostalgia increased social connectedness, which predicted greater IOGS and outgroup trust. IOGS and outgroup trust, in turn, predicted more positive outgroup attitudes. We ruled out alternative explanations for the results (i.e., mood, perceived positivity, and typicality of the recalled outgroup member). The findings speak to the intricate psychological processes underlying the prejudice-reduction function of nostalgia and their interventional potential. Copyright © 2013 John Wiley & Sons, Ltd.

Approximately 400 million people worldwide suffer from a mental illness (World Health Organization, 2004). In addition to their symptoms, sufferers are forced to carry an extra burden: the stigma attached to mental illness. For example, in a recent survey by the UK Department of Health (2009), 11% of respondents stated that they would not want to live next door to someone with a mental health problem, 22% opined that those with a mental illness should be excluded from public office, and 77% of women asserted that persons who have at any time been a patient in a mental health hospital could not be trusted as babysitters. Moreover, persons with a mental illness label are ascribed less humanity than those with a physical illness label, which in turn predicts increased perceptions of the former as dangerous (Martinez, Piff, Mendoza-Denton, & Hinshaw, 2011). Worryingly, even health care providers are not immune to stigmatization of the mentally ill: 56% of medical students think that persons with mental illness are "not easy to like" (Byrne, 1999).

This stigma has consequences for access to, and efficacy of, health care. For example, persons with a diagnosis of mental illness have reduced access to primary health care and receive inferior care for diabetes and heart attacks (Druss, Bradford, Rosenheck, Radford, & Krumholz, 2001; Levinson, Druss, Dombrowski, & Rosenheck, 2003). In addition, mental health stigma is often a major barrier to success in friendships and at work (Hayward & Bright, 1997). As a result of mental health stigma and the associated discrimination, mental health problems are often underestimated, under-diagnosed, and untreated (Bauman, 2007). Indeed, a survey of almost 10 000 adults in the USA found that the majority of persons with mental disorders take an average of 8 years to begin seeking treatment (Wang et al., 2005). Given these far-reaching consequences, it is essential that the mental health stigma be tackled. We are interested in psychological means of combating this stigma and particularly in the role of nostalgia.

NOSTALGIA

Nostalgia, "a sentimental longing or wistful affection for the past" (*The New Oxford Dictionary of English*, 1998, p. 1266), was historically regarded a brain malfunction, psychiatric disorder, or variant of depression (Sedikides, Wildschut, & Baden, 2004). Recent research has, however, begun to rehabilitate the image of nostalgia (Sedikides, Wildschut, Arndt, & Routledge, 2006, 2008). This research suggests that nostalgia has the following characteristics. First, it is a bittersweet yet predominantly positive and self-relevant emotion (Barrett et al., 2010; Hart et al., 2011; Vess, Arndt, Routledge, Sedikides, & Wildschut, 2012). Second, it occurs relatively frequently (e.g., about three times a week in a sample of university students; Wildschut, Sedikides, Arndt, & Routledge, 2006) and is experienced by almost everyone (Boym, 2001; Routledge et al., 2011;

Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010). Third, it evinces similar lay conceptualizations across cultures (Hepper et al., 2013).

OUTGROUP ATTITUDE AS A CONSEQUENCE OF NOSTALGIA

Nostalgia is a complex, social emotion involving high-level cognitive evaluations of the self and others (Johnson-Laird & Oatley, 1989; Wildschut et al., 2006). There is now substantial evidence that engaging in nostalgic recollection of the past has a powerful, positive impact on how individuals perceive themselves. In addition, nostalgia affects how individuals view others, how connected they feel to them, and how meaningful they perceive life to be (Routledge, Wildschut, Sedikides, Juhl, & Arndt, 2012; Sedikides, Wildschut, Arndt et al., 2008; van Tilburg, Igou & Sedikides, 2012). Furthermore, nostalgia is not just a mere description of the past, but it allows individuals to engage reflectively with how their past is relevant to the present (Stephan, Sedikides, & Wildschut, 2012; Wildschut, Sedikides, & Cordaro, 2011). Thus, nostalgia prompts individuals to perform complex cognitive evaluations of the self in relation to others, which become consequential for their actions in the present.

A key psychological function of nostalgia is as a resource of social connectedness. A prototype analysis of the nostalgia construct concluded that "people and relationships" (friends, family, and partners) along with "interpersonal elements or concepts" (belonging, cuddles, tender moments, warmth, and love) are perceived as centrally defining features of nostalgia (Hepper, Ritchie, Sedikides, & Wildschut, 2012). Content analytic and survey studies have established that close others as well as momentous events involving close others comprise the bulk of nostalgic referents (Wildschut et al., 2006). In addition, when experimentally induced, nostalgia has a range of consequences for how connected we feel to others. It nurtures sentiments of being protected and loved, reduces attachment anxiety and attachment avoidance, and counteracts loneliness by engendering perceptions of social support. It also elevates perceptions of social competence, raises estimates of the number of friends one has, and increases volunteering intentions as well as actual charity donations (Sedikides, Wildschut, Routledge, Arndt, & Zhou, 2009; Wildschut et al., 2006, 2010; Zhou, Sedikides, Wildschut, & Gao, 2008; Zhou, Wildschut, Sedikides, Shi, & Feng, 2012). Wildschut et al. (2010) suggested that the positive outcomes of nostalgia are a function of meaningful past relationships that are made accessible during nostalgic reverie. It is therefore through rendering accessible mental representations of the self and others in the past that nostalgia strengthens social bonds in the present.

Given its potential to enable positive relationships by increasing a sense of social connectedness, nostalgia becomes relevant to the study of prejudice reduction. Recently, we proposed that the beneficial effect of nostalgia on social connectedness at an interpersonal level could be extended to the level of intergroup relations (Turner, Wildschut, & Sedikides, 2012). Across two experiments, we found that

nostalgic recall of a past encounter involving an overweight person (an outgroup member) led to more positive attitudes toward overweight persons in general, by increasing the perceived similarity and commonality between the ingroup and outgroup as well as by increasing trust in the outgroup and decreasing intergroup anxiety. This is the first time that nostalgia has been shown empirically to improve intergroup attitudes, suggesting that its social function is not limited to interpersonal relationships. Although central to our argument, social connectedness was not directly assessed in these previous experiments and has therefore yet to be tested as a potential mediator of the effect of nostalgia on outgroup attitude. In the present article, we aim to rectify this limitation by investigating the role of social connectedness (Experiment 2).

We propose that nostalgia, by fostering a sense of social connectedness, gives rise to "an expansive state of mind" (Kaplan, 1987, p. 465) or an approach orientation (Stephan, Sedikides, Wildschut, Routledge, & Vingerhoets, 2013), whereby one opens up to the possibility of new relationships. When individuals become nostalgic about a known outgroup member, they will experience elevated social connectedness. Provided that membership of the outgroup member is salient (Brown & Hewstone, 2005), social connectedness will culminate in inclusion in the self not just of that person but, importantly, of the entire outgroup (Turner, Hewstone, Voci, & Vonofakou, 2008; Turner et al., 2012). A key ensuing benefit will be a more positive attitude toward the outgroup. Thus, our model's distinct contribution is to demonstrate how nostalgia can be used to reduce prejudice by first setting into action an interpersonal psychological mechanism—that is, creating a heightened sense of social connectedness—which then enables positive intergroup outcomes such as outgroup trust and inclusion of the outgroup in the self (IOGS). In addition, this model has wider implications for intergroup contact research by showing how mental representations of a previous encounter with an outgroup member can be recruited through nostalgic recollection to influence positively attitudes toward the entire outgroup in the present. Thus, the current work continues to unpack the complexity of nostalgia as a social emotion, involving psychological mechanisms both at the interpersonal and intergroup levels.

Across two experiments, we examine whether and how nostalgia may be effective at reducing the mental health stigma by enabling a sense of connectedness. In Experiment 1, we replicated previous research on the prejudice-reduction function of nostalgia, using a different outgroup target and a more subtle manipulation of nostalgia. In Experiment 2, we investigated the extended psychological mechanisms (via social connectedness, outgroup trust, and IOGS) underlying the association between nostalgia and participants' overall attitude toward people who suffer from mental health issues.

EXPERIMENT 1

In this experiment, we aimed to replicate our initial findings (Turner et al., 2012) using a different outgroup target (people with mental health problems) and a different manipulation of

nostalgia. By focusing on mental health stigma rather than overweight stigma, we intended to show that the positive social effect of nostalgia is not restricted to a particular outgroup. Instead, by examining diverse outgroups, we can be more certain that the psychological mechanisms underlying the relation between nostalgia and prejudice reduction are not just a function of the groups studied.

To induce nostalgia, we used a subtle yet impactful manipulation developed by Hepper et al. (2012). They asked participants to generate words ostensibly associated with nostalgia, which were coded into features. Another sample then rated the typicality of these features for "nostalgia." On the basis of these ratings, Hepper et al. classified the features as central (e.g., memories, relationships, longing, missing, and wanting to return to the past) or peripheral (e.g., daydreaming, wishing, comfort and warmth, loneliness, and sadness) to the nostalgic experience. In a further study, participants who recalled an event involving the central (vs. peripheral) features subsequently reported greater nostalgia, and, in line with previous research (Routledge et al., 2011; Wildschut et al., 2006), more positive mood, higher self-regard, stronger social connectedness, and perceptions of life as meaningful. Compared with previous methods of inducing nostalgia experimentally, one of the main advantages of this prototype-based method is that it removes demand characteristics by eliminating participants' expectations about how nostalgia should feel. In addition, it does not require participants to know the meaning of the word nostalgia. We adapted this technique to induce nostalgia in an intergroup context and determine its prejudice-reducing function in relation to people who are mentally ill.

We were particularly interested in consolidating the role of IOGS in explaining the effect of nostalgia on outgroup attitudes. IOGS refers to the degree to which the mental representation of the self is seen to overlap with that of the outgroup. When a close interpersonal relationship arises between the self and an outgroup member, the categorization of the self and the outgroup has been found to change toward greater inclusion and, therefore, lower levels of prejudice toward the outgroup. Thus, an interpersonal interaction with an outgroup member is effective at reducing prejudice, if it produces a change in how close to the self the entire outgroup is perceived to be in terms of identity, perspectives, and resources (Aron & McLaughlin-Volpe, 2001).

We hypothesized that nostalgic reverie about an encounter with a person with mental illness (i.e., the outgroup member) would improve attitudes toward the mentally ill (i.e., the outgroup). Furthermore, we predicted that this relation would be mediated by greater IOGS.

Method

Participants and procedure

Participants were 81 University of Southampton undergraduates (66 female and 15 male; age range = 18–30 years, $M_{AGE} = 19.75$, $SD_{AGE} = 2.53$). They were tested individually in separate cubicles. All participants received the following instructions (adapted from Hepper et al., 2012):

We are going to ask you to recall an interaction with someone you know. We would like you to bring to mind a person you know who has a mental illness (for example, depression, bipolar disorder, or schizophrenia). We would like you to choose someone you know well. This could be an (present or former) acquaintance, friend, partner, or family member. Please write down the name of this person here (space provided).

Participants were randomly assigned to conditions and read: "Below are listed several features that might describe or characterize experiences and memories that we have in our lives. Please take a minute or two to read through the features."

In the *central features (nostalgia) condition*, participants received the following words: reminiscence, keepsakes, dwelling, rose-tinted memories, familiar smells, wanting to return to the past, family/friends, longing, feeling happy, childhood, emotions, and personal. In the *peripheral features (control) condition*, participants received the following words: daydreaming, anxiety/pain, wishing, achievements, regret, feeling, warm/comforted, loneliness, bittersweet, feeling sad, change, aging, bad memories. All participants then read:

Now please bring to mind an event in your life that involved interacting with the person whom you identified on the previous page which is relevant to or characterized by at least five of these features. Specifically, try to think of a past event whereby at least five of the features either were *part* of the event, and/or describe your experience as you *think about* the event. This event can be a recent experience or it could relate back to the earlier years of your life. Circle all of the features above that are relevant to this event (at least five). Now we would like you to spend five minutes imagining that you are back at this event. Try and immerse yourself into this event, trying to remember exactly what happened at the time you interacted with the person you identified on the previous page.

Finally, participants wrote a description of the event, filled out the manipulation check and dependent measures, and were debriefed. They completed the dependent measures in the following order: IOGS, outgroup attitude, positivity of the selected outgroup member, and typicality of the selected outgroup member.

Manipulation Check

Participants responded to three items (Routledge et al., 2008; Wildschut et al., 2006; Zhou, Wildschut, Sedikides, Chen, & Vingerhoets, 2012): "Right now, I am feeling quite nostalgic," "Right now, I am having nostalgic feelings," and "I feel nostalgic at the moment" (1 = *strongly disagree*, 6 = *strongly agree*; α = .95). Higher scores reflected greater nostalgia.

Inclusion of the outgroup in the self

Participants indicated how close they felt to people with a mental illness by choosing one of seven Venn diagrams. These diagrams varied in degree of overlap, from no overlap at all (i.e., separate circles) to almost full overlap (for more

details, see Aron, Aron, & Smollan, 1992). Participants were instructed that one of the circles in the diagram represented themselves and the other represented *all* people with a mental illness in general. The greater the overlap between the circles, the greater IOGS.

Outgroup Attitude

Participants completed a feeling thermometer measure, in which they indicated (0 to 100) how positively they felt toward people with a mental illness in general (Haddock, Zanna, & Esses, 1993).

Variables Controlling for Alternative Explanations

Tasks involving nostalgic recollection of an encounter with an outgroup member are amenable to criticism. First, participants in the nostalgia (vs. control) condition may be inclined to bring to mind an encounter with a more likeable as well as more atypical person. If so, changes in outgroup attitudes may be simply attributed to between-conditions differences in perceived positivity and typicality of the outgroup member. We addressed this issue by instructing participants to identify an outgroup member *prior* to the manipulation (i.e., nostalgic vs. control encounter). Thus, the manipulation could not influence the positivity and typicality of the selected outgroup member. To ascertain this, we assessed liking and typicality of the selected outgroup member. Finally, we asked participants to indicate whether their encounter involved an individual suffering from a transitory mental illness, a long-term mental illness, or some other kind of mental illness. This enabled us to examine the role of mental illness type in the effect of nostalgia on mental health stigma.

Positivity of the Selected Outgroup Member   Participants rated the positivity of the selected outgroup member on two items: "How much do you like this individual?" (1 = *not at all*, 7 = *very much*) and "How positive is your attitude towards this individual" (1 = *not at all positive*, 7 = *very positive*; *r* [84] = .71, *p* < .001).

Typicality of the Selected Outgroup Member   Participants rated the typicality of the selected outgroup member on two items: "How typical do you think this person is of people with a mental illness in general?" and "How representative do you think this person is of people with a mental illness in general?" (1 = *not at all*, 7 = *very much*; *r*[84] = .88, *p* < .001).

Nature of Mental Illness Experienced by the Selected Outgroup Member   Participants indicated whether the person involved in the encounter had a long-term or transitory (e.g., one-off episode) mental illness.

Results and Discussion

Descriptive statistics and bivariate correlations for all the variables measured in the study are presented in Table 1.

Manipulation Check

As intended, participants were more nostalgic in the central features (nostalgia) condition (*M* = 4.08, *SD* = 1.23) than in

Table 1. Means, standard deviations, and correlations between variables in experiment 1

	M (*SD*)	1	2	3	4	5
1. Condition	—	—				
2. IOGS	3.74 (1.84)	.21(*)	—			
3. Outgroup attitude	69.22 (16.70)	.26*	.49***	—		
4. Target positivity	5.94 (1.29)	.12	.22*	.17	—	
5. Target typicality	4.38 (1.54)	.001	.04	−.14	.12	—

Note: N = 81. IOGS, inclusion of the outgroup in the self.
*p < .10;
*p < .05;
***p < .001.

the peripheral features (control) condition (*M* = 3.47, *SD* = 1.33), *F*(1, 79) = 4.63, *p* = .04, *d* = 0.48.

Outgroup Attitude

We hypothesized that nostalgia would improve outgroup attitudes: nostalgic (relative to control) participants would evaluate persons with mental illness more favorably. Consistent with the hypothesis, nostalgic (*M* = 73.26, *SD* = 17.00) relative to control (*M* = 64.66, *SD* = 15.31) participants held a more positive attitude toward the mentally ill, *F*(1, 79) = 5.66, *p* = .02, *d* = 0.53.

Inclusion of the Outgroup in the Self as Mediator

We dummy coded the independent variable (0 = *control condition*, 1 = *nostalgia condition*). We then examined whether IOGS mediated the effect of nostalgia on outgroup attitude. The effect of nostalgia on IOGS was marginal, *β* = .20, *t*(79) = 1.87, *p* = .066. The relation between IOGS and outgroup attitude, while controlling for condition, was significant, *β* = .46, *t*(78) = 4.61, *p* < .001. However, when IOGS (the mediator) was controlled, the effect of nostalgia on outgroup attitude was no longer significant, *β* = .16, *t*(78) = 1.66, *p* = .10. This suggests that the beneficial effect of nostalgia on outgroup attitude is mediated by IOGS. Bootstrapping analysis (Preacher & Hayes, 2004), based on 5000 bootstrap samples confirmed mediation: mean bootstrap estimate[1] = 3.12, 95% confidence interval = 0.09/7.46.

Characteristics of the Selected Outgroup Member

Sixty participants recalled an encounter involving someone with a long-term mental illness (29 in the nostalgia condition and 31 in the control condition), whereas 13 recalled an encounter involving someone with a transitory mental illness (five in the nostalgia condition and eight in the control condition), six selected the option "other," and two did not respond. We considered the relative distribution of target person's type of mental illness (long term vs. transitory) across conditions by using Fisher's chi-square analyses, and we found no difference

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[1]We report unstandardized beta coefficients for mean point estimates as these can be interpreted more meaningfully when a dichotomous independent variable such as condition is involved (Hayes, 2009)—that is, as the mean difference in the outgroup attitude measure between the nostalgia and control conditions attributable to the pathway through the mediator(s).

between the two conditions ($p = .54$), $OR = 1.71$. No between-condition differences emerged in positivity of the selected outgroup member, $F(1, 79) = 1.22$, $p = .27$, $d = 0.24$, and typicality of the selected outgroup member, $F(1, 79) = .0004$, $p = .99$, $d = 0.001$. Moreover, even when both variables were included in the analyses as covariates, participants in the nostalgia condition still held a more positive attitude toward the mentally ill than those in the control condition, $F(1, 77) = 4.86$, $p = .03$, $d = 0.49$. In sum, the results could not be accounted for by positivity or typicality of the selected outgroup member.

EXPERIMENT 2

In Experiment 1, we conceptually replicated prior evidence for the beneficial effect of nostalgia on intergroup attitudes (Turner et al., 2012), using a different target outgroup and manipulation of nostalgia. We demonstrated that thinking nostalgically about a past encounter involving someone with a mental illness can reduce the mental health stigma, an effect that was mediated by an increase in IOGS. In Experiment 2, we extended these findings by examining a serial mediation model whereby nostalgia increases social connectedness (interpersonal mechanism), which predicts greater IOGS and trust toward the outgroup (intergroup mechanisms). IOGS and outgroup trust, in turn, predict a more positive overall attitude toward people with mental health issues. We depict this theoretical model in Figure 1.

Our main argument rests on the assumption that nostalgic reverie about an encounter with a familiar mentally ill person will infuse participants with a sense of social connectedness. Given the salience of the *group membership* of the mentally ill person during the recall task, we propose that this sense of social connectedness should come to encompass the *whole* category of "mentally ill persons," which should lead to greater IOGS and outgroup trust. In turn, IOGS and outgroup trust have been shown to predict more positive outgroup attitudes (Turner, Crisp, & Lambert, 2007). In sum, we expect social connectedness, an interpersonal process, to influence outgroup attitude via specific group-level processes. The model we propose should therefore unpack the psychological mechanisms underlying the positive potential of nostalgia to reduce prejudice toward socially stigmatized groups, including mentally ill persons.

In order to ensure that the effects of nostalgia generalize regardless of manipulation type, we implemented a different technique: a modified version of the nostalgia induction introduced by Wildschut et al. (2006; see also: Hepper et al., 2012; Routledge et al., 2011; Stephan et al., 2012).

Method

Participants and Procedure

Participants were 48 University of Leeds undergraduates (42 female and 6 male; age range = 18–23 years, $M_{AGE} = 19.48$, $SD_{AGE} = 1.54$). They were tested individually in separate cubicles. All participants received the following instructions:

> We are going to ask you to recall an interaction with someone you know. We would like you to bring to mind a person you know who has a mental illness (for example, depression, bipolar disorder, or schizophrenia). We would like you to choose someone you know well. This could be an (present or former) acquaintance, friend, partner, or family member. Please write down the name of this person here (space provided).

Participants were next randomly assigned to one of the two experimental conditions.

In the *nostalgia condition*, they learned:

> According to the Oxford Dictionary, "nostalgia" is defined as a "sentimental longing for the past." Please bring to mind a nostalgic event in your life that involved interacting with the person whom you identified on the previous page. Specifically, try to think of a past event involving this person that makes you feel most nostalgic. Now we would like you to spend five minutes imagining that you are back at this nostalgic event. Try and immerse yourself into this nostalgic event, remembering what it was like and how you felt at the time you interacted with this person.

In the *control condition*, participants learned:

> This is a study on autobiographical memory—that is, on your memory about your past. Please bring to mind an ordinary event in your life that involved interacting with the person whom you identified on the previous page.
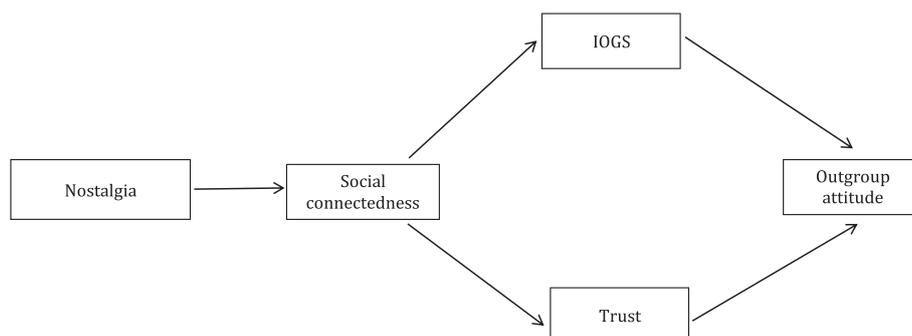

Figure 1. Theoretical model showing the interpersonal and intergroup psychological mechanisms underlying the effect of nostalgia on outgroup attitude

Specifically, try to think of a past event involving this person that is ordinary. Bring to mind an objective record of this event and think it through as though you were a scientist or historian recording factual details. Now we would like you to spend five minutes imagining that you are back at this event. Try and immerse yourself into this autobiographical event, trying to remember exactly what happened at the time you interacted with this person.

Finally, participants wrote a description of the event, filled out the manipulation check and dependent measures, and were debriefed. Participants completed the dependent measures in the following order: mood, social connectedness, IOGS, outgroup trust, outgroup attitude, positivity of the selected outgroup member, and typicality of the selected outgroup member.

Dependent Measures

Manipulation Check

We used the same items as in Experiment 1 ($\alpha = .98$).

Social Connectedness

Participants indicated their agreement with the following four items preceded by the stem "Thinking about this interaction": "... makes me feel connected to loved ones," "... makes me feel protected," "... makes me feel loved," and "... makes me feel I can trust others" ($1 = strongly\ disagree$, $6 = strongly\ agree$; $\alpha = .83$; Hepper et al., 2012). Higher scores reflected stronger social connectedness.

Inclusion of the Outgroup in the Self

We used the same measure as in Experiment 1.

Outgroup Trust

We used a five-item adapted version of the Tam, Hewstone, Kenworthy, and Cairns' (2009) scale: "Right now, I am able to trust a person with a mental illness as much as any other person" ($1 = strongly\ disagree$, $7 = strongly\ agree$), "Right now, I am able to trust a person with a mental illness with personal information about myself" ($1 = strongly\ disagree$, $7 = strongly\ agree$), "Do you think most people with a mental illness would try to take advantage of you if they got the chance, or would they try to be fair?" ($1 = try\ to\ take\ advantage$, $7 = be\ fair$), "Would you say that most of the time people with a mental illness try to be helpful, or that they are mostly just looking out for themselves?" ($1 = looking\ out\ for\ themselves$, $7 = helpful$), and "Generally speaking, would you say that people with a mental illness can be trusted, or that you can't be too careful?" ($1 = can't\ be\ too\ careful$, $7 = can\ be\ trusted$). Higher scores indicated higher levels of trust ($\alpha = .86$).

Outgroup Attitude

We used a more comprehensive measure of outgroup attitude than that of Experiment 1. Participants were asked to

"Please indicate how you feel about people with a mental illness right now. For each of the following scales, circle the number that best reflects how you feel." They then responded on a 7-point scale to the following four bipolar items: *positive–negative*, *friendly–hostile*, *respect–contempt*, and *admiration–disgust* ($\alpha = .88$, adapted from Wright, Aron, McLaughlin-Volpe, & Ropp, 1997).

Variables Pertinent to Alternative Explanations

Positivity of the Selected Outgroup Member

Participants rated the positivity of the selected outgroup member on two items: "How much do you like this individual?" ($1 = not\ at\ all$, $7 = very\ much$) and "How positive is your attitude towards this individual" ($1 = not\ at\ all\ positive$, $7 = very\ positive$; $r[46] = .81$, $p < .001$).

Typicality of the Selected Outgroup Member

Participants rated the typicality of the selected outgroup member on two items: "How typical do you think this person is of people with a mental illness in general?" and "How representative do you think this person is of people with a mental illness in general?" ($1 = not\ at\ all$, $7 = very\ much$; $r[46] = .67$, $p < .001$).

Mood

In addition to including measures of perceived likeability and typicality, as in Experiment 1, this experiment aimed to rule out two additional alternative explanations for the expected findings. Nostalgic reverie may put participants in a better mood, although the relevant findings have been somewhat mixed (Wildschut et al., 2006; Stephan et al., 2012; Zhou, Wildschut, Sedikides, Shi et al., 2012). Better mood rather than nostalgia per se may account for a more positive outgroup attitude. The experiment tested this alternative by assessing participants' mood. Specifically, participants read the stem "Thinking about this interaction" and then responded to the items "... puts me in a good mood" and "... makes me feel joyful" ($1 = strongly\ disagree$, $6 = strongly\ agree$; $r[46] = .88$, $p < .001$; Wildschut et al., 2010).

Results and Discussion

Descriptive statistics and bivariate correlations for all the variables measured in the study are presented in Table 2.

Manipulation Check

As intended, participants were more nostalgic in the nostalgia condition ($M = 4.86$, $SD = 1.07$) than in the control condition ($M = 3.91$, $SD = 1.35$), $F(1, 46) = 7.24$, $p = .01$, $d = 0.78$.

Outgroup Attitude

We hypothesized that nostalgia would improve outgroup attitudes, that is, nostalgic (relative to control) participants would evaluate persons with mental illness more favorably. Consistent with the hypothesis, nostalgic ($M = 5.83$, $SD = 0.97$) relative to

Table 2. Means, standard deviations, and correlations between variables in experiment 2

	M (*SD*)	1	2	3	4	5	6	7	8
1. Condition	—	—							
2. Social connectedness	3.80 (1.07)	.42**	—						
3. IOGS	3.73 (1.80)	.29*	.37**	—					
4. Trust	4.85 (1.16)	.22	.38**	.26(*)	—				
5. Outgroup attitude	5.50 (.92)	.37**	.44**	.47**	.59***	—			
6. Target positivity	5.60 (1.53)	.10	.34*	.09	.29*	.25(*)	—		
7. Target typicality	4.34 (1.53)	−.08	−.08	−.004	−.13	−.11	.30*	—	
8. Participant mood	2.85 (1.56)	.20	.31*	.14	.38**	.26(*)	.13	−.13	—

Note: N = 48. IOGS, inclusion of the outgroup in the self.
*$p < .10$;
*$p < .05$;
**$p < .01$;
***$p < .001$.

control ($M = 5.16$, $SD = 0.74$) participants held a more positive attitude towards persons with a mental illness, $F(1, 46) = 7.39$, $p = .009$, $d = 0.78$.

Mediators of the Nostalgia Effect

We next examined whether the putative mediators of the relationship between nostalgia and outgroup attitude—social connectedness, IOGS, and outgroup trust—might also be influenced by nostalgia. Participants in the nostalgia condition reported greater social connectedness ($M = 4.25$, $SD = 1.11$) than did those in the control condition ($M = 3.35$, $SD = 0.84$), $F(1, 46) = 9.93$, $p = .003$, $d = 0.91$. Nostalgic ($M = 4.25$, $SD = 1.45$) relative to control ($M = 3.21$, $SD = 1.98$) participants also reported greater IOGS with persons with a mental illness, $F(1, 46) = 4.34$, $p = 0.43$, $d = 60$. Although nostalgia did not directly affect outgroup trust, $F(1, 46) = 2.44$, $p = .13$, $d = 0.45$, it was significantly positively correlated with both social connectedness and outgroup attitude (Table 2). We therefore examined whether it played an intermediate role mediating between these two variables.

Serial Mediation Model

To explain the effect of nostalgia on overall outgroup attitudes, we hypothesized a serial mediation model, whereby nostalgia increases a sense of social connectedness, which in turn predicts higher levels of IOGS and outgroup trust. IOGS and outgroup trust, in turn, were expected to predict a more positive overall attitude towards persons with a mental illness (Figure 1). We tested this serial mediation model in a structural equation modeling analysis using MPLUS version 6.1 (Muthén & Muthén, 2011). We dummy coded the independent variable (0 = *control condition*, 1 = *nostalgia condition*).

As shown in Figure 2, the positive, direct effect of nostalgia on overall outgroup attitude was mediated by social connectedness, IOGS, and outgroup trust. As expected, nostalgia increased social connectedness, which then predicted higher levels of IOGS and outgroup trust. IOGS and outgroup trust, in turn, predicted more positive overall attitudes towards mentally ill persons. Bootstrapping estimates (based on 5000 bootstrap samples) indicated significant indirect effects of

nostalgia on overall outgroup attitudes both via social connectedness and IOGS (mean point estimate[2] = 0.06, 95% confidence interval = 0.01/0.21) as well as via social connectedness and outgroup trust (mean point estimate = 0.12, 95% confidence interval = 0.02/0.40). Altogether, these variables explained almost half of the variance in outgroup attitude scores.

As predicted, social connectedness mediated the effect of nostalgia on IOGS and outgroup trust (Figure 2). Bootstrapping estimates again indicated significant indirect effects of nostalgia on the two group-level variables (IOGS: mean point estimate = 0.45, 95% confidence interval = 0.05/1.01; outgroup trust: mean point estimate = 0.36, 95% confidence interval = 0.05/0.88).

Finally, IOGS and outgroup trust mediated the association between social connectedness and overall attitude towards mentally ill persons (Figure 2). Bootstrapping estimates indicated significant indirect effects of social connectedness via the two group-level variables (IOGS: mean point estimate = 0.07, 95% confidence interval = 0.003/0.20; outgroup trust: mean point estimate = 0.14, 95% confidence interval = 0.01/0.36).

In a last step, we estimated the fit of our theoretical model depicted in Figure 1 (i.e., excluding the non-significant direct effects). The results indicated that our model had an excellent fit ($\chi^2[4] = 3.88$, $p = .48$; $CFI = 1.00$, $TLI = 1.00$, $SRMR = 0.063$, $RMSEA = 0.000$, [0.000–0.215]).

Alternative Explanations

No between-condition differences emerged in positivity of the selected outgroup member, $F(1, 46) = .43$, $p = .52$, $d = 0.19$, typicality of the selected outgroup member, $F(1, 48) = .26$, $p = .61$, $d = 0.15$, or mood, $F(1, 46) = 1.96$, $p = .17$, $d = 0.40$. Moreover, even when all three variables were included in the analyses as covariates, participants in the nostalgia condition still held a more positive attitude towards the mentally ill than participants in the control condition, $F(1, 43) = 5.02$, $p = .03$, $d = 0.66$. In sum, the results could not be accounted for by positivity and typicality of the selected outgroup member or by mood.

GENERAL DISCUSSION

We were concerned with the potentially beneficial role of nostalgia in improving outgroup attitude (Turner et al., 2012)

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[2]Given the small sample size, we report bias-corrected confidence intervals (Shrout & Bolger, 2002). Also see footnote 1.
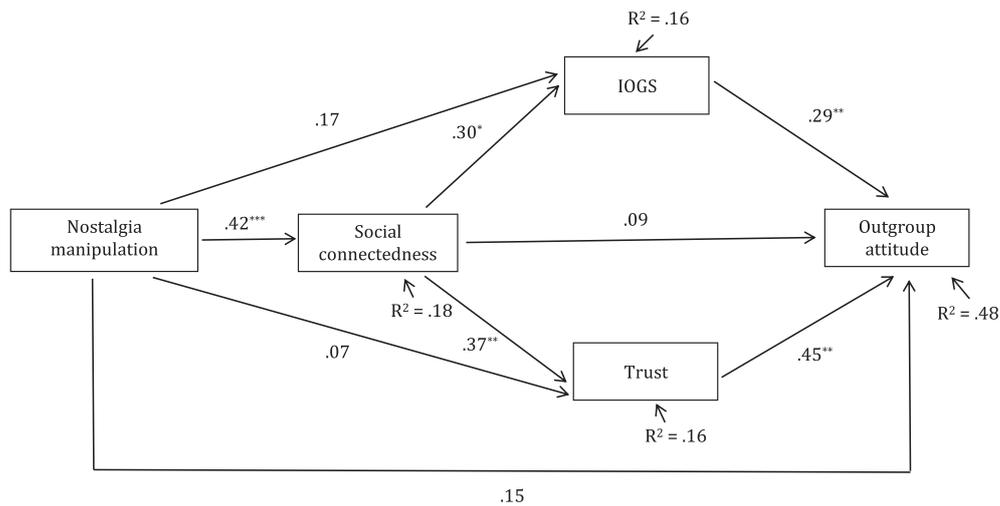
Figure 2.   A serial mediation model estimating the mediating roles of social connectedness, IOGS, and outgroup trust in the effect of nostalgia and overall outgroup attitude. Note: All coefficients are standardized betas. *$p < .05$; **$p < .01$; $N = 48$

and, in particular, in combating the pervasive mental health stigma. We were also interested in finding out *how* nostalgia performs its prejudice-reduction function.

Nostalgia is a self-relevant and social emotion, as it reflects the self embedded with others in meaningful life events (Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010; Routledge et al., 2011; Routledge, Sedikides, Wildschut, & Juhl, 2013). During nostalgic engagement, figures from one's past become part of one's present (Sedikides, Wildschut, Arndt et al., 2008; Sedikides, Wildschut, Gaertner et al., 2008). Nostalgia, then, imbues the individual with a sense of social connectedness, sociality, warmth, and comfort (Hepper et al., 2012). And yet nostalgia does not simply represent an escape into the past. Instead, nostalgia has implications for the future, as it involves an approach orientation (i.e., pursuit of desirable goals) rather than an avoidance orientation (abandonment of undesirable goals; Stephan et al., 2013). By directing the individual forward, nostalgia offers the allure of new relationships, or of contact with others in general.

Summary of Findings

Participants reflected on a past encounter with an outgroup member, a person with a mental illness. We manipulated nostalgia using two methods: focusing on central versus peripheral features of the nostalgia construct in Experiment 1 (Hepper et al., 2012) and recalling a nostalgic versus ordinary autobiographical event in Experiment 2 (Wildschut et al., 2006). Regardless of manipulation type, participants who reflected nostalgically on an intergroup encounter subsequently reported greater IOGS and, in turn, a more positive attitude towards persons with a mental illness. Moreover, in Experiment 2, we demonstrated that nostalgia increases IOGS and outgroup trust via a further mechanism. Nostalgic participants felt more closely connected to loved ones. In turn, they were more prone to including persons with a mental illness in the self, as well as trusting them more, which engendered a more positive attitude towards the mentally ill. Furthermore, the effects of nostalgia on IOGS and outgroup trust were fully mediated by social connectedness, whereas the association of

social connectedness with overall outgroup attitude was fully mediated by IOGS and outgroup trust.

These findings represent a substantial theoretical advancement over previous research looking at the role of nostalgia in reducing prejudice (Turner et al., 2012). The findings bring support for a specific mediational chain through which nostalgia combats the mental health stigma. In particular, nostalgia contributed to reducing the stigma via two mechanisms: (i) an *interpersonal process*, increased social connectedness, which subsequently predicted (ii) *intergroup processes*, specifically, increased IOGS and outgroup trust. The implication of both interpersonal and intergroup processes attests to the complexity of nostalgia as a social emotion. Reminiscing nostalgically about a past encounter with an outgroup member prompts the individual to re-engage in high-level evaluations of the self in relation to others, which are then consequential for individual's actions in the present.

Limitations and Implications

We examined the effect of nostalgia on general mental health stigma, but we acknowledge that perceptions of mental illness vary considerably (West & Hewstone, 2010). In a survey, for example, many university students believed that people with schizophrenia are a danger to others, but far fewer believed that those with depression or eating disorders represent danger. Also, approximately a third of respondents believed that those with an eating disorder have themselves to blame for the condition, whereas less than one tenth believed that this to be the case for depression or schizophrenia (Corrigan et al., 2001). Hence, nostalgia may be a more useful strategy for some forms of mental illness than others. Furthermore, in our nostalgia manipulations, participants are required to *know* someone with a mental illness in order for nostalgia to improve outgroup attitude. One may, perhaps, be more likely to know someone with depression than someone with a personality disorder.

A useful avenue for future research would be an examination of when and where nostalgia is likely to most effectively reduce mental health stigma. Nostalgia may, for example, be

most effective at improving intergroup attitudes where the target outgroup is (i) relatively familiar to participants and (ii) perceived as relatively unthreatening. In instructing participants to bring to mind a person with a mental illness, we provided the examples of depression, bipolar disorder, and schizophrenia. In the context of these examples, and given prevailing mental illness frequencies and perceptions, nostalgia may work better when the target outgroup comprises persons with depression rather than persons with schizophrenia. A related line of research would be to identify whether nostalgia affects different types of mental health stigma via different mechanisms. For example, nostalgia may improve attitudes towards those with depression by generating empathy. In contrast, nostalgia may improve attitudes towards persons with schizophrenia (who are often perceived as threatening) by reducing intergroup anxiety (Stephan & Stephan, 1985).

The obtained findings have interventional implications. Arguably, nostalgia is easier to implement and sustain than actual intergroup contact (Pettigrew & Tropp, 2006). Similarly, nostalgia may, for the purpose of interventions, have advantages over imagined intergroup contact. Studies on imagined intergroup contact have demonstrated that participants who imagine interacting with an outgroup member subsequently show more positive outgroup attitudes than control participants (Crisp & Turner, 2009; Turner et al., 2007). However, those studies have not drawn on participants' autobiographical memories as a source of imagined contact. Thus, (i) the imagined contact may be relatively impoverished (i.e., lacking in texture and affect), (ii) people might not spontaneously engage in this type of abstract mental imagery, and (iii) any intervention might therefore be difficult to maintain (low adherence) and might produce suboptimal results.

Coda

Our findings offer insight into *how* imagined contact interventions may be implemented successfully by capitalizing upon the propensity for most individuals to recall nostalgic memories on a regular basis (Wildschut et al., 2006) and by mining the rich deposits of nostalgic memories that undoubtedly will involve outgroup members (Turner et al., 2012). Perhaps mental travel into the past is more effective than mental travel into the future in improving outgroup attitudes and, in the long run, in improving the success of face-to-face intergroup encounters (Allport, 1954). The empirical avenues and intervention prospects are promising.

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