

How to win friendship and trust by influencing people's feelings: An investigation of interpersonal affect regulation and the quality of relationships

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Abstract

Research suggests that people deliberately try to improve others' feelings in a variety of social contexts. However, little is known about whether and how interpersonal affect regulation influences the quality of people's relationships. Two applied social network studies investigated the relational effects of interpersonal affect regulation. In Study 1, attempts to improve others' affect among grocery store employees were associated with both regulatory targets' and agents' perceptions of friendship and trust. In Study 2, we replicated this finding amongst staff and prisoners in a high-security prison. Additionally, we showed that these associations were mediated by positive changes to regulatory targets' and agents' affect. The results provide insights into the social consequences of interpersonal affect regulation and help to elucidate the factors influencing the formation and maintenance of high-quality relationships.

Keywords

Interpersonal affect regulation, emotion regulation, close relationships, friendship, trust

The process of deliberately trying to shape others' feelings, termed *interpersonal affect regulation*, is part of everyday social life. Attempts to improve others' affect are prevalent within a range of social contexts, including romantic and familial relationships (Thompson & Meyer, 2007). Organizational contexts are no exception, with a strong body of research suggesting that employees commonly engage in interpersonal affect regulation towards their coworkers and clients, e.g., using humor to relieve work-related anxiety or listening to problems to alleviate distress (Lively, 2000; Locke, 1996). However, the effects of this process on employees' relationships with their coworkers and clients are poorly understood. This is important because high-quality relationships, such as those characterized by friendship and trust, are necessary for the development of individuals' psychological well-being and flourishing (Dutton & Heaphy, 2003). They also promote positive group processes, including interpersonal co-operation, teamworking, and productive conflict, which may explain differences in competitive advantage between organizations (Jones & George, 1998; Shah & Jehn, 1993). Consequently, if attempting to improve others' affect can facilitate the formation and maintenance of high-quality connections, additional benefits for both employees and their organizations may occur. The aim of this paper is therefore to investigate whether attempting to improve others' affect accrues relational benefits, in the form of high-quality interpersonal relationships.

We present two studies that test this central idea. The research makes three key contributions to theory and research. First, it provides the first explicit test of the social consequences of attempts to improve others' affect by investigating whether such attempts are associated with friendship and trusting relationships in two distinct organizational contexts. Second, we not only consider whether attempts to improve others' affect accrue relational benefits, but also *how* these benefits might arise. Specifically, we examine positive changes in affect as a potential mechanistic pathway. Third, the research contributes to the wider literature concerning how high-quality relationships are formed and maintained within organizational

contexts; in contrast to cognitive accounts that emphasize instrumental factors (e.g., DeScioli, Kurzban, Koch, & Liben-Nowell, 2011) we highlight attempts to improve other people's feelings as a key factor influencing relationship development.

Interpersonal affect regulation

When people experience unpleasant or unwanted affective states, i.e., negative emotions or moods, they are not powerless to change them. Instead, people can engage in affect regulation, “the process of initiating, maintaining, modulating, or changing the occurrence, intensity, or duration of internal feeling states” (Eisenberg, Fabes, Guthrie, & Reiser, 2000: p. 137). Research has traditionally focused on the regulation of one's own affect and a strong body of literature has been established regarding the effects of emotion self-regulation, especially when used in the fulfillment of organizational rules (i.e., emotional labor; Guerrier & Adib, 2003; Vincent, 2011).

However, over the last decade or so, there has been increasing interest in the idea that people can also regulate the feelings of those around them via the process of interpersonal affect regulation. Interpersonal affect regulation can be formally defined as deliberate attempts by one social entity known as the ‘agent’ to change the emotions or moods of another social entity known as the ‘target’ (Gross & Thompson, 2007). The process commonly occurs within dyadic relationships, with agent and target being single individuals, e.g., a medical professional trying to inspire hope in a patient (Francis, Monahan, & Berger, 1999); however, it can also occur between larger social entities, e.g., a support group trying to alleviate the negative emotions its members (Thoits, 1996). A recent conceptual framework proposed by Niven, Totterdell, and Holman (2009) mapped out the scope of interpersonal affect regulation, situating it in relation to other interpersonal processes studied in social and applied psychological domains (e.g., social support, impression management, interpersonal influence, bullying, and emotional labor). Essentially, people may engage in interpersonal affect regulation with a view to achieving the broader social

goals of giving care, influencing attitudes or behaviors, rejecting someone, or fulfilling role requirements, but interpersonal affect regulation is considered a distinct construct because the *primary* aim of the act is to influence someone else's affect.

The process of interpersonal affect regulation has come under the spotlight in part thanks to its inclusion in theoretical models of emotional intelligence. As one of the set of emotion-related abilities that is thought to comprise emotional intelligence (e.g., Mayer & Salovey, 1997), the ability to manage other people's feelings has been theorized as a factor contributing towards effective leadership (George, 2000) and negotiation (Morris & Keltner, 2000) in organizational contexts. However, empirical research concerning interpersonal affect regulation has mostly focused on interpersonal affect regulation at the behavioral level, documenting the use of intentional strategic behaviors to influence others' feelings. Within this emerging literature, strategies to improve others' affect, i.e., to increase others' pleasant affect or decrease others' unpleasant affect, have been highlighted as particularly pervasive in a range of social contexts, including romantic relationships, parent-child relationships, and support groups (Thoits, 1996; Thompson & Meyer, 2007). In work settings, similarly, strategic attempts to improve others' affect appear to be a key feature of daily life in organizations such as hospitals, law firms, retail settings, and even prisons (Francis et al., 1999; Lively, 2000; Locke, 1996; Niven, Totterdell, & Holman, 2007; Pierce, 1999; Rafaeli & Sutton, 1991).

Effects of interpersonal affect regulation on the quality of relationships

Although we know that employees commonly engage in interpersonal affect regulation in their relationships with their coworkers and clients, to date little research has investigated the effects of this process with respect to the quality of those relationships. There are many indicators of high-quality relationships (Dutton & Heaphy, 2003), but in this paper, we focus on friendship and trust. Friendship is characterized by liking and affection and a trusting relationship is

characterized by confidence that one will not be harmed or exploited (Jones & George, 1998). We focus on these qualities because, according to Bove and Johnson (2001), they represent the best indicators of two of the key characteristics of high-quality interpersonal connections; friendship is the best indicator of the *closeness* of a connection, while trust is the best indicator of connection *strength*. Friendship and trust can make a real difference to quality of life and performance at work, as both close and strong connections are considered valuable social resources (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and core components of social capital (Adler & Kwon, 2002). Indeed, previous research has reported links between these features of relationships and better health, job satisfaction, decision making, and job performance (Chou, Wang, Wang, Huang, & Cheng, 2008; Hartup & Stevens, 1997; Krackhardt, 1992).

Perceptions of friendship and trust are held by both people within the relationship. People are thought to strive to create reciprocated relationships (e.g., relationships in which both people trust each other) because imbalance can cause feelings of uncertainty and instability (Heider, 1958), and in support of this previous research indicates strong tendencies towards reciprocation of relationships (e.g., Snijders & Baerveldt, 2003). However, it cannot be assumed that friendship and trust will always be reciprocated. As such, in our research we consider whether interpersonal affect regulation influences the perceptions of relationship quality held by both the regulatory agent (i.e., the person who attempts to improve someone else's feelings) and the regulatory target (i.e., the person whose feelings are subjected to efforts to change them).

Existing research provides some very preliminary evidence of a positive link between interpersonal affect regulation and high-quality relationships. For example, studies suggest that emotional intelligence (of which the ability to regulate others' affect is a core component) may aid people in achieving higher quality social interactions (Lopes, Brackett, Nezlek, Schütz, Sellin, & Salovey, 2004) and relationship satisfaction (Lopes, Salovey, Côté & Beers, 2005). Research looking more specifically at interpersonal affect regulation is also somewhat suggestive of such a

link; qualitative accounts imply that interpersonal affect regulation can enhance solidarity in support groups (Thoits, 1996), while theoretical work by Williams (2007) argues that the strategic regulation of others' feelings may help to build trust across organizational boundaries. In this paper, we propose that interpersonal affect regulation will influence both regulatory targets' and agents' perceptions of friendship and trust and that the main reason why attempts to improve others' feelings have a beneficial impact on bonding is because they cause positive changes in people's affect. Below, we detail our theoretical arguments.

Theory development and hypotheses

Effects of interpersonal affect regulation on regulatory targets

To understand why interpersonal affect regulation might positively influence regulatory targets' views of relationship quality, we first explain why interpersonal affect regulation is likely to influence targets' affect, then go on to describe how a positive change in affect may result in the target holding a positive view of his or her relationship with the agent. With respect to the first part of our argument, by definition interpersonal affect regulation is an interaction initiated by the agent with the aim of positively influencing the affect of the target. Theories of emotion communication help us to understand how this positive influence might transpire. In particular, affect-as-communication theories (e.g., Parkinson, 1996) suggest that emotions serve social communicative functions that are central to their meaning (e.g., anger serves to blame others), and thus they transmit information to observers about a person's goals, intentions and attitudes. The emotions-as-social-information (EASI) model (Van Kleef, 2009) further explains that, using inferential processing, observers cognitively appraise these goals, intentions and attitudes, and what those signify for their relationship, with these appraisals ultimately influencing affect. Consistent with these theories, we expect that attempts to improve someone else's affect should communicate positive information to regulatory targets (e.g., the agent wants me to be happier so

he or she must like me) and thus should positively influence targets' affect. In support of these assertions, existing empirical evidence suggests that attempts to improve others' affect have positive effects for the moods of regulatory targets (Niven et al., 2007).

So how might positive changes to targets' affect result in a positive impact on their views of relationship quality? According to Lawler's affect exchange theory (2001), exchanges (i.e., dyadic interactions) that generate pleasant affect play an important role in building and maintaining high quality connections because people attribute the pleasant affect to their exchange partners (in this case, to the regulatory agent). Certainly, it is well established from cognitive-processing theories of emotion that pleasant affect leads people to make more positive judgments about the quality of their relationships. For example, affect-as-information theory (Schwarz & Clore, 1983) argues that people use the way they are feeling as a source of information about the value of their relationships, such that pleasant affect implies positive value and unpleasant affect implies negative value. Similarly, mood-congruency theory (Isen, Shalke, Clark & Karp, 1978) suggests that mood primes the recall of congruent information and thus activates memories about one's exchange partner that are mood-congruent. In support of such theories, empirical studies highlight a strong link between individuals' affective states and their judgments of the quality of their relationships (Lyubomirsky, King, & Diener, 2005).

The above arguments suggest that interpersonal affect regulation is likely to result in the intended target positively viewing his or her relationship with the regulatory agent. The first hypothesis, which we test across both of our studies, is therefore as follows:

Hypothesis 1: Attempts to improve others' affect will be associated positively with the target reporting friendship and trust with the regulatory agent.

Our arguments also suggest that the affect of the regulatory target may form an important pathway through which positive effects on relationship quality arise. In our second study, we therefore additionally test the following hypothesis:

Hypothesis 2: The positive relationships between attempts to improve others' affect and the target's reports of friendship and trust with the regulatory agent will be mediated by positive changes in the target's affect.

Effects of interpersonal affect regulation on regulatory agents

So far, we have proposed that attempts to manage another person's feelings will influence the relationship perceptions of the intended target. Now we consider whether these same attempts might also influence the agent who initiates the regulatory exchange.

We start by arguing that interpersonal affect regulation is likely to have a positive impact on the affect of the regulatory agent, based on three theories of emotion communication. First, Côté's (2005) social interaction theory argues that supportive behavioral feedback from an exchange partner (in this case, the regulatory target) can elicit pleasant feelings in a person who engages in affect regulation. These support behaviors can directly influence agents' affect and can also buffer the effects of other stressors by increasing the agents' perceptions that others will provide resources to help them to cope with such stressors. Second, Buck's (1980) facial feedback theory suggests that when people form facial expressions of emotion, the muscles that are engaged actually lead to the internal experience of emotion. As such, agents who express pleasant emotion while attempting to improve others' emotions (e.g., by smiling while using humor) may come to actually feel that emotion. Research on primitive contagion also suggests that agents are likely to automatically mimic the emotions expressed by regulatory targets, meaning that targets' affective responses to interpersonal affect regulation may be transmitted to

agents (e.g., Hatfield, Cacioppo, & Rapson, 1993). Finally, Van Kleef's (2009) EASI model suggests that even in cases where feedback is not available from the target, interpersonal affect regulation may still influence the agent's affect; merely anticipating the target's response may be enough to trigger appraisals and thus an emotional response. In line with these theories, empirical evidence indicates that positive interpersonal behaviors (e.g., helping) can improve the affect of the person engaging in the behaviors as well as the recipient (Lyubomirsky, Sheldon, & Schkade, 2005; Salovey, Mayer, & Rosenhan, 1991). Research directly concerning interpersonal affect regulation concurs with such findings, highlighting that attempts to improve others' affect have positive effects for the affective well-being of regulatory agents (Anonymized, in press).

As we have argued already, a person who experiences pleasant affect after an interaction is likely to judge the quality of his or her relationships favorably (Lawler, 2001). We therefore expect that interpersonal affect regulation will lead to the regulatory agent positively viewing his or her relationship with the intended target. Our specific hypothesis, tested in both studies, is:

Hypothesis 3: Attempts to improve others' affect will be associated positively with the regulatory agent reporting friendship and trust with the target.

Again, we have theorized that changes in affect form the main route through which these positive effects are realized. As such, in our second study we also test the following hypothesis:

Hypothesis 4: The positive relationships between attempts to improve others' affect and the regulatory agent's reports of friendship and trust with the target will be mediated by positive changes in the agent's affect.

Overview of the present research

We investigated our hypotheses in two field studies. We considered it important to test the predicted relationships in contexts where friendship and trust have meaningful implications. As such, we conducted both studies in applied settings in which perceptions of relationship quality were salient. Study 1 tested Hypotheses 1 and 3 among employees in a grocery store, while Study 2 tested Hypotheses 1-4 among staff and prisoners in a high-security prison.

We took a relational approach to measurement, using a social network design for our studies, as we conceptualized friendship and trust as dyadic processes and focused on acts of interpersonal affect regulation between two people. Social network designs involve taking measures from each member of a given network (e.g., a peer group, a work team) concerning their relationships with every other member of the network, allowing researchers to directly access the views of both people involved in a relationship. This approach enabled us to clearly link interpersonal affect regulation attempts between a particular agent and target with the same agent's and target's perceptions of their relationship quality.

Study 1

Method

Sample and design

Study 1 tested Hypotheses 1 and 3 among a sample of employees in a grocery store. This context was chosen because employees in service organizations may use friendship and trust with their coworkers as a resource to enable them to deal with the everyday demands of their work (Dormann & Zapf, 2004). The social network in this study was the whole group of 38 employees and we received useable data from 31 of these individuals (19 male, 12 female), who averaged 34.57 years of age ($SD = 8.59$ years) and 3.78 years of tenure on the job ($SD = 2.64$ years). Respondents all completed a survey comprising demographic items and a series of measures

concerning their relationships with every other network member. Only data pertaining to the 31 respondents was used in analyses.

Measures

All social network items were collected using a roster design (Zwijze-Koning & de Jong, 2005). Participants were presented with a list of all employees in the store and were asked to place a tick next to the names of all individuals that each item applied to. This method was chosen to reduce measurement error associated with poor recall and so to improve the reliability of the data provided (Marsden, 1990). The trade-off with such an approach is that it places a high demand on participants' time, as it requires participants to report on their relationships with all other network members; in the current study, there were 38 people in the network, meaning that each question was answered 37 times. It is therefore common to measure network relations in a binary manner, assessing the presence or absence of a feature of relationships, because asking participants to rate aspects of each relationship (e.g., extent of strategy use, intensity of trust) would likely lead to respondent fatigue and thus unreliable data (Grosser, Kidwell-Lopez, & Labianca, 2010; Ho, Rousseau, & Levesque, 2006; Krackhardt & Kilduff, 1999). Similarly, many researchers opt to use single items to assess core variables, because using multiple items to assess each social relationship would be extremely fatiguing (Borgatti & Cross, 2003; Ferrin, Dirks, & Shah, 2006; Ho et al., 2006). Assessing relationships in these ways has been concluded to be mostly reliable (Marsden, 1990).

Interpersonal affect regulation. To assess the use of interpersonal affect regulation, we used a scale comprising four binary network items. We measured interpersonal affect regulation from the perspective of the agent of regulation, because attempts are defined on the basis of intent on the part of the agent and targets may not always be aware that an attempt has taken place

(Kelly & Barsade, 2001). Items therefore asked participants to indicate which of their coworkers they had used particular interpersonal affect regulation strategies towards with the *deliberate intention* of improving the coworker's feelings over the previous two weeks. We used multiple items to assess interpersonal affect regulation because previous research indicates a wide variety of strategies that people draw on to improve others' affect (Niven et al., 2009) and we wanted our measure to provide an accurate representation of whether interpersonal affect regulation was used or not used within any given relationship. The items we chose were adapted from a six-item measure of interpersonal affect regulation, which has previously been shown to have high reliability across three samples (α s ranging between .82 and .93; Niven, Totterdell, Stride, & Holman, 2011). The particular items we chose (complimenting, joking, listening to someone's problems, and using soothing tones or words) represented the four main types of affect-improving strategies identified in Niven et al.'s (2009) empirically-tested conceptual framework. We used the mean score of the items with respect to each agent-target pairing as an indicator of whether interpersonal affect regulation had been used within the relationship ($\alpha = .62$). Because the internal consistency of the scale was relatively modest in the current sample, we used an additional method to check the reliability of the scale, as used by Grosser and colleagues (2010). This method involves running a correlation between the data matrix representing the scale and a symmetrised version of the matrix (using Quadratic Assignment Procedure, QAP, discussed below). Our results suggested a highly significant correlation ($r = .71, p < .01$) and thus provided additional support for the reliability of the measure with the current sample.

Friendship and trust. Perceptions of friendship and trust were each measured using single binary social network items. To assess friendship, we asked participants to indicate which of their coworkers they considered to be a friend over the previous two weeks. The trust item asked participants which of their coworkers they had trusted over the previous two weeks. Similar items

have been successfully used in other social network studies (e.g., Levin & Cross, 2004; Morrison, 2002).

Control variables. As social network data is of a dyadic form, standard demographic control variables cannot be included in analyses. Instead, dyadic control variables can be constructed to represent similarities or differences between pairs of respondents on demographic characteristics (see Borgatti & Cross, 2003). In this study, we controlled for gender similarity and organizational tenure difference. Gender similarity can affect communication frequency and thus may influence the likelihood of developing friendship and trust (McPherson, Smith-Lovin, & Cook, 2001). Also, because people who enter an organization at the same time are more likely to form bonds, a greater difference in tenure between respondents may negatively influence the likelihood of friendship and trust (Zenger & Lawrence, 1989). For gender, a similarity matrix was constructed where values of '1' were assigned to relationships between pairs of respondents of the same gender and values of '0' were assigned to relationships between pairs of respondents of differing gender. For tenure, a difference matrix calculated the absolute difference between the tenure (in years) of each pair of respondents.

Overview of analyses

Each social network item was expressed as a separate persons x persons matrix. Outgoing ties (i.e., participants' reports about their relationships with others) were presented along each row of the matrix. The columns of the matrix therefore showed the incoming ties (i.e., others' reports about their relationships with each participant). Our single items assessing friendship and trust therefore provided measures of both agents' and targets' reports of their relationship; participants' reports of friendship and trust with other network members (in other words, agents' reports) were represented by the original data matrices, whereas other network members' reports

of friendship and trust with each participant (in other words, targets' reports) were calculated by transposing the data matrices such that columns become rows.

We analyzed the data using Ucinet, a program designed specifically for social network data (Borgatti, Everett, & Freeman, 2002). Ucinet calculates descriptive statistics by counting the number of *actual* ties within a given network (e.g., the number of relationships within which participants have indicated being friends with each other) and the number of *possible* ties in the network. Mean values therefore represent the average amount that each variable is exhibited in relationships in the network (e.g., the mean amount of friendship within each tie in the network). For the interpersonal affect regulation scale, we first calculated the mean score of the four scale items within each cell of the matrix to create a new variable and then calculated descriptive statistics for this new matrix, such that mean values indicated the average amount that interpersonal affect regulation was used within each tie in the network.

Ucinet analyses correlations and regressions using the same procedures as non-network analyses only on a cell-by-cell basis (i.e., each cell of the independent variable matrix is correlated with the corresponding cell of the dependent variable matrix). However, as observations are not independent, Ucinet uses Quadratic Assignment Procedure (QAP) to test significance, which involves running permutations of the dependent variable matrix to generate a distribution of alternative outcomes, and then computing the chances of observing the actual matrix against this distribution. The hypotheses were tested using QAP regression, with targets' (Hypothesis 1) or agents' (Hypothesis 3) reports of friendship and trust as the dependent variables. At Step 1, our control variables (gender similarity and tenure difference) were entered as predictors, then at Step 2 interpersonal affect regulation was entered. Results are presented at Step 2 of analysis, with the change of variance at Step 2 reported. In total, four models were tested: Model 1 tested the effects of agents' use of interpersonal affect regulation on targets' reports of friendship; Model 2 tested the effects of agents' use of interpersonal affect regulation

on targets' reports of trust; Model 3 tested the effects of agents' use of interpersonal affect regulation on agents' reports of friendship; and Model 4 tested the effects of agents' use of interpersonal affect regulation on agents' reports of trust. The number of observations represented the number of possible relationships, i.e., 930 (31 participants x 30 fellow network members).

Results

Means, standard deviations and correlations (tested using QAP correlation) between the main study variables are displayed in Table 1. In the friendship network, 46% of all ties were reciprocated, while 55% of ties were reciprocated in the trust network. QAP regression analyses displayed in Model 1 of Table 2 show that, after controlling for gender similarity and tenure difference, agents' use of interpersonal affect regulation towards a target was positively associated with targets' reports of friendship ($\beta = .19, p < .01$), explaining 4% of the variance. However, agents' use of interpersonal affect regulation was not significantly associated with targets' reports of trust ($\beta = .06, p = .14$) (see Model 2, Table 2). Hypothesis 1 was thus only partly supported. Analyses shown in Models 3 and 4 of Table 2 also show that agents' use of interpersonal affect regulation was positively associated agents' reports of friendship ($\beta = .48, p < .01$) and trust ($\beta = .18, p < .01$) with a target. Interpersonal affect regulation explained, respectively, 22% and 4% of the variance in friendship and trust. The results therefore fully supported Hypothesis 3.

INSERT TABLES 1 AND 2 ABOUT HERE

Discussion

The results of Study 1 suggest that grocery store employees were more likely to view their coworkers as friends if they had attempted to improve those coworkers' feelings *or* if the

coworkers had tried to improve their feelings. They were also more likely to trust coworkers whose feelings they had tried to improve. However, attempts to improve affect were not linked to targets' perceptions of trust and associations between interpersonal affect regulation and trust were weaker than those between interpersonal affect regulation and friendship. One reason for this may be the relatively high levels of trust compared to friendship reported in this context; on average respondents reported trusting over half of their coworkers but being friends with around a quarter. Perhaps employees in service organizations like the grocery store trust their coworkers by default because they expect people like themselves to be employed there, and rather than attempts to improve others' affect facilitating trust, it may only be that negative behaviors disrupt trust. If this were the case, then studying interpersonal affect regulation and trust in a context where trust was rarer might provide greater support for this hypothesis. We therefore tested our hypotheses in a second study conducted in a prison, which is seen as a 'low trust organization' because a large proportion of the population (i.e., the inmates) has been incarcerated for criminal activities, making it difficult for trust to develop (Liebling & Arnold, 2005).

Study 2 was also conducted to overcome limitations of the current study. Notably, the current study did not test whether changes in agents' and targets' affect as a result of interpersonal affect regulation were responsible for the link between regulatory attempts and relationship quality. In addition, the results of the current study were somewhat difficult to interpret with respect to our theoretical predictions because data were collected at a single time-point, meaning that while attempting to regulate another's affect *may* have promoted trust and friendship (as we argue), it is also possible that people only tried to improve the affect of those who they trusted or considered to be a friend (the alternative relation). Finally, because our data were collected at a single time-point in the current study, we were not able to test the robustness of the relations of interest across both relationships that were initially reciprocated (i.e., those where agents and targets both trusted each other or considered each other to be friends) and

relationships that were not reciprocated. It is possible that targets' appraisals of agents' intentions and motives might differ within unreciprocated relationships, leading to regulatory attempts having a negligible or even a negative effect on targets' reports of relationship quality.

Study 2

Study 2 investigated Hypotheses 1-4 in a prison. This allowed us to try to replicate the findings of Study 1 in a different setting to determine whether the relationships we observed were robust and to test our additional mediation hypotheses. In the prison, there were ongoing relationships between staff and prisoners, and so our networks included both groups. The prison differed from the grocery store in Study 1 in that confinement seemed likely to heighten the intensity and meaning of interactions, and the target sample were likely to have greater problems maintaining relationships (Genders & Player, 1995). This study aimed to extend Study 1 in two main ways. The first extension was to investigate relationships between interpersonal affect regulation and relationship quality (Hypotheses 1 and 3) across two time-points in order to provide more convincing support for our theoretical predictions about the causal relationship between interpersonal affect regulation and relationship quality. The second extension was to examine whether changes in people's affect across the two time-points mediated the associations between interpersonal affect regulation and relationship quality (Hypotheses 2 and 4). In addition to these key extensions, collecting data across two time-points allowed us to conduct supplementary analyses exploring whether the effects of interpersonal affect regulation differed within relationships that were reciprocated and those that were not.

Method

Sample and design

The prison in this study used a therapeutic regime for the psychological treatment of offenders. It provided a relevant context because friendship and trust may help to mitigate the high levels of strain typically reported among prison staff and prisoners (Cooper & Livingston, 1991; Schaufeli & Peeters, 2000) and facilitate positive therapeutic outcomes for prisoners (Genders & Player, 1995). Study 2 employed the same social network survey design as Study 1, but with two surveys administered one month apart. Staff and prisoners from three prison wings (mean $N = 37$) and a security staff team ($N = 18$) took part in the study. Each of these groups was relatively self-contained and so formed a separate network, with participants asked to indicate their responses to the social network items from a roster list of people from within their own network only. Staff included: uniformed prison officers, responsible for security duties on the wings and facilitating therapy sessions; specialist therapists; psychologists who conducted risk assessments; and security personnel who worked on the external prison gate.

At the first time point, 82 participants completed surveys. This included 31 staff (19 males, 12 females) who had a mean age of 40.77 years ($SD = 9.14$ years) and mean tenure of 6.35 years ($SD = 6.9$ years), and 51 prisoners (all males), who had a mean age of 36.76 years ($SD = 9.87$ years) and mean tenure of 1.70 years ($SD = 1.35$ years). Of the 82 participants, 16 came from the security staff team, and 17, 23, and 26 came from each of the prison wings. Response rates ranged between 46% and 89% across the four networks. At the second time point, 56 of these participants completed the survey a second time, including 19 staff (12 males, 7 females) who had a mean age of 39.25 years ($SD = 7.77$ years) and a mean tenure of 4.32 years ($SD = 3.82$ years), and 37 prisoners (all males), who had a mean age of 37.11 years ($SD = 10.8$ years) and mean tenure of 1.69 years ($SD = 1.15$ years). Of the 56 participants, 7 came from the security staff team, and 14, 18, and 17 came from each of the prison wings. At this time point, response

rates ranged between 38% and 50%. An attrition analysis comparing those who responded at T1 and T2 (stayers) with those who responded only at T1 (leavers) across all T1 study variables (Goodman & Blum, 1996), found two differences: compared with leavers, stayers were more likely to be prisoners than staff ($t(81) = 3.06, p < .01$); and stayers had lower tenure ($M = 2.34$) than leavers ($M = 5.47$) ($t(81) = -2.92, p < .01$). However, t-tests comparing correlation coefficients between the key study variables at T1 for stayers and for leavers revealed no significant differences, indicating that attrition did not affect the relationships of interest.

Measures

Interpersonal affect regulation. Use of affect-improving interpersonal affect regulation was measured in the first survey (T1) using the same items as Study 1 ($\alpha = .74$). We assumed that ties would not form between people from different networks, as both staff and inmates had extremely limited opportunities to interact with people from other networks. As such, we asked people about their use of interpersonal affect regulation (as well as friendship and trust) with members of their own network only. A similar approach has been used in other studies, e.g., Geller and Bamberger's (2009) study of interpersonal helping. In the current study, we sought further validation of our measure of interpersonal affect regulation against other-reported data, by asking participants to indicate which of their fellow network members they believed had used the four affect-improving strategies towards themselves over the previous two weeks in the T1 survey. While we would not expect a perfect correlation between self- and other-reports (as targets may not always have access to the intentions behind agents' actions; Kelly & Barsade, 2001) the strategies that we assessed are observable behaviors and thus we would expect some relationship. Indeed targets' perceptions of the use of interpersonal affect regulation were moderately correlated with agents' self-reported use of interpersonal affect regulation ($r = .37, p < .01$).

Friendship and trust. Friendship and trust within each network were also measured using the same items as Study 1. These constructs were measured in both the T1 and T2 surveys, to assess the longitudinal effects of interpersonal affect regulation.

Agents and targets' affect. We assessed participants' affect in both the T1 and T2 surveys using two binary items which represented the two main factors of affect proposed in Watson and Tellegen's (1985) circumplex model: positive affect and negative affect. Because we were interested in changes to the pleasantness of agents' and targets' affect, we chose items representing the pleasant side of each factor. Thus we had an item representing high positive affect ('enthusiastic') and an item representing low negative affect ('calm'). These states therefore differed primarily in terms of the level of activation involved, with enthusiasm representing a high activation pleasant state and calmness representing a low activation pleasant state (Russell, 1980). Rather than simply asking participants whether they had felt this way in general over the previous two weeks, we asked participants to indicate which of their fellow network members had made them feel each of the two states over this period. This enabled us to map changes in affect as a direct result of interactions with a particular person, allowing us to test whether the use of interpersonal affect regulation between two people was related to changes in those same people's affect, and, through this route, to changes in those people's views of their relationship. There was a high correlation between the two items (at T1 $r = .57, p < .01$; at T2 $r = .50, p < .01$), and so we used the mean of the two items as an indicator of participants' affect (although it should be noted that the pattern of results was highly similar when both states were analyzed separately). Like our measures of friendship and trust, these mean values provided us with measures of both agents' and targets' affect (agents' affect was located along matrix rows, while targets' affect was derived from matrix columns).

Control variables. Like Study 1, we used the control variables of gender similarity and organizational tenure difference. We also constructed an additional control variable representing

status similarity, because in the prison context high-quality relationships may be more likely to form between pairs of individuals of the same status (i.e., two staff members or two prisoners, coded '1' in the variable matrix), and less likely to form between pairs of differing status (i.e., a staff member and a prisoner, coded '0') (Genders & Player, 1995).

Overview of analyses

Data from the four networks were analyzed using a program called Dyadic Analysis for Multiple Networks (DAMN; Martin, 1999), which analyzes relational data from multiple networks. DAMN uses the same procedures as Ucinet to calculate descriptive statistics, with statistics calculated within each network and then averaged across the multiple networks (so that, for example, the mean score for friendship represented the average amount of friendship within each plausible relationship in the prison). Like Ucinet, DAMN uses QAP procedures to test correlations and regressions, but it permutes outcome matrices only within and not between networks, preventing 'impossible' ties being created in the distribution of alternative outcomes, and controlling for differences between networks (Martin, 1999). All hypotheses were tested using QAP regression in DAMN, with gender similarity, status similarity and organizational tenure difference included as control variables. As we assumed that participants would not be able to form relationships with those outside their network, the number of observations equaled the number of possible relationships in each of the four networks added together.

To test Hypotheses 1 and 3 longitudinally, we investigated whether the use of interpersonal affect regulation predicted *changes* in perceptions of friendship and trust. As such, we tested whether use of interpersonal affect regulation at T1 predicted friendship and trust at T2 when controlling for friendship and trust at T1. Like Study 1, four models were tested, relating to the different dependent variables (friendship and trust for regulatory targets and agents, respectively). We also conducted supplementary moderation analyses exploring whether the effects of

interpersonal affect regulation on target' friendship and trust varied according to whether interpersonal affect regulation was used within a reciprocated relationship. Here, we tested whether reciprocation of friendship or trust at T1 moderated the relationship between interpersonal affect regulation at T1 and targets' reports of friendship or trust at T2.

Hypotheses 2 and 4 concerned mediation effects and were tested using Baron and Kenny's (1986) four-stage method. We tested dynamic mediated relationships, looking at whether use of interpersonal affect regulation at T1 predicted changes in targets' and agents' affect, and, via this path, change in their perceptions of relationship quality (Pitariu & Ployhart, 2010). As such, our mediations were tested as follows. First, relationships between interpersonal affect regulation and friendship and trust were established in Steps 1 of Models 1-4 to test Hypotheses 1 and 3 (Stage 1). Next, two new models tested whether interpersonal affect regulation (at T1) predicted the T2 measures of the proposed mediators – targets' affect (Model 5) and agents' affect (Model 6) – when the T1 measure of the same person's affect was controlled for (Stage 2). The T1 and T2 measures of targets' affect were then added to Models 1 and 2 in Step 2 to test Hypothesis 2, and the T1 and T2 measures of agents' affect were added to Models 3 and 4 in Step 2 to test Hypothesis 4. A significant effect for T2 affect in this analysis would establish support for Stage 3 of Baron and Kenny's (1986) method. Finally, mediation could be determined at Stage 4, as indicated by a non-significant interpersonal affect regulation effect on friendship and trust in the same models, when changes in affect were taken into account. Because QAP analyses do not calculate standard errors, the significance of the reduction in variance explained by the independent variable could not be tested. Instead, the size of the indirect effect was estimated by calculating the ratio of the indirect effect to the total effect (Kenny, Kashy, & Bolger, 1998).

Results

Table 3 shows the means, standard deviations and correlations (tested using QAP correlation) between the main study variables. Correlations indicate that interpersonal affect regulation was significantly associated with both targets' and agents' reports of friendship and trust at T1 and T2, at $p < .01$. In support of our assertion that prisons are relatively 'low trust organizations', the proportion of possible relationships characterized by trust was 30%, as compared with 55% in the supermarket. Even among staff-staff ties, only 35% of possible relationships were characterized by trust in the prison. In this study, 32% of friendship ties were reciprocated at T1 and 23% were reciprocated at T2, while 27% of trust ties were reciprocated at T1 and 26% were reciprocated at T2.

INSERT TABLE 3 ABOUT HERE

Effects of interpersonal affect regulation on relationship quality

QAP regression analyses (see Table 4, Models 1 and 2, Step 1) revealed that, after controlling for gender similarity, tenure difference, and status similarity, agents' use of interpersonal affect regulation was associated with changes in targets' reports of friendship ($\beta = .08, p < .05$) and trust ($\beta = .13, p < .01$), supporting Hypothesis 1. Hypothesis 3 was also supported as analyses (see Table 4, Models 3 and 4, Step 1) showed that agents' use of interpersonal affect regulation was associated with changes in agents' reports of friendship ($\beta = .15, p < .01$) and trust ($\beta = .32, p < .01$). Supplementary moderation analyses, shown in Table 5, revealed a significant interaction between interpersonal affect regulation and reciprocity of friendship ($\beta = .11, p < .01$). Figure 1 shows that interpersonal affect regulation was more strongly associated with targets' reports of friendship at T2 when used within reciprocated friendships ($\beta = .14, p < .01$), but that a significant relationship between regulation and friendship was also present within unreciprocated

friendships ($\beta = .04, p < .01$), albeit smaller in size. No such interaction was observed between interpersonal affect regulation and reciprocity of trust ($\beta = .03, ns$).

INSERT TABLES 4 AND 5 AND FIGURE 1 ABOUT HERE

Mediated effects of interpersonal affect regulation on relationship quality

The above analyses testing Hypotheses 1 and 3 show that interpersonal affect regulation predicted changes in targets' and agents' perceptions of relationship quality. Model 5 in Table 4 shows that use of interpersonal affect regulation was associated with changes in regulatory targets' affect ($\beta = .16, p < .01$), while Model 6 in Table 4 shows that agents' use of interpersonal affect regulation was associated with changes in their own affect ($\beta = .17, p < .01$).¹ Stages 1 and 2 of Baron and Kenny's (1986) method for testing mediation were therefore supported.

To test Stages 3 and 4, we first examined whether changes in targets' affect mediated the effects of agents' use of interpersonal affect regulation on targets' perceptions of relationship quality (Hypothesis 2). The results show that when targets' affect was added to the model with targets' friendship as the dependent variable (see Table 4, Model 1, Step 2), targets' affect at T2 significantly predicted their reports of friendship ($\beta = .42, p < .01$). The effect of agents' use of interpersonal affect regulation was no longer significant ($\beta = .01, ns$) in this model, indicating (at least partial) mediation. Similarly, when targets' affect was added to the model with targets' trust as the dependent variable (see Table 4, Model 4, Step 2), targets' affect at T2 significantly predicted their reports of trust ($\beta = .43, p < .01$), while interpersonal affect regulation no longer predicted this outcome ($\beta = .04, ns$). These results, illustrated in Figure 2, provide strong evidence that changes in targets' affect mediate the effects of interpersonal affect regulation on targets' reports of relationship quality, in line with Hypothesis 2. The mediation accounted for

84% of the relationship between interpersonal affect regulation and targets' reports of friendship, and 53% of the relationship between interpersonal affect regulation and trust.

INSERT FIGURE 2 ABOUT HERE

Next, we tested whether changes in agents' affect mediated the effects of interpersonal affect regulation on agents' perceptions of relationship quality (Hypothesis 4). The results show that when agents' affect was added to the model with agents' friendship as the dependent variable (see Table 4, Model 3, Step 2), agents' affect at T2 significantly predicted their reports of friendship ($\beta = .43, p < .01$), while the effect of interpersonal affect regulation was no longer significant ($\beta = .07, ns$). Likewise, we found that when agents' affect was added to the model with agents' trust as the dependent variable (see Table 4, Model 4, Step 2), agents' affect at T2 significantly predicted their views of trust ($\beta = .45, p < .01$). In this model, there was a reduction in the size of the coefficient between interpersonal affect regulation and trust, but interpersonal affect regulation was still significantly associated with this outcome ($\beta = .22, p < .01$). These results, which are also illustrated in Figure 2, suggest that changes in agents' affect mediate the effects of agents' use of interpersonal affect regulation on their reports of relationship quality (although only partly in the case of agents' reports of trust), in line with Hypothesis 4. The mediated pathway accounted for 49% of the relationship between interpersonal affect regulation and agents' reports of friendship, and 24% for trust.

It should be noted that the mediations that we observed were such that people's own affect – but not their relationship partners' affect – mediated the effects of interpersonal affect regulation on their perceptions of relationship quality. Changes in agents' affect did not mediate the relationship between interpersonal affect regulation and targets' reports of friendship or trust (agents' affect at T2 did not predict targets' reports of friendship $\beta = .08, ns$, or trust $\beta = .08, ns$),

and similarly changes in targets' affect did not mediate the relationship between interpersonal affect regulation and agents' reports of friendship or trust (targets' affect at T2 did not predict agents' reports of friendship $\beta = .07$, *ns*, or trust $\beta = .05$, *ns*).

Discussion

Study 2 provides further support for the proposal that trying to improve others' affect can positively influence relationship quality. Specifically, our findings indicate that interpersonal affect regulation is related to changes in friendship and trust one month later. These findings are consistent with a causal relationship between interpersonal affect regulation and relationship quality and are thus supportive of our theoretical predictions. However, the correlational design of the study still precludes a definitive statement about causality. The findings of our supplementary analyses revealed that interpersonal affect regulation positively influenced targets' reports of trust when it was used within the context of both reciprocated and unreciprocated trust relationships. Positive effects on targets' reports of friendship were also evident within both reciprocated and unreciprocated friendships, but were more likely to be found within already-reciprocated friendships. These findings suggest that when interpersonal affect regulation is used by someone that is not considered a friend, the target may not always appraise the agent's motives and intentions positively.

Perhaps the key contribution of Study 2 has been to show that changes to people's affect mediate the associations between interpersonal affect regulation and relationship qualities. Our results suggest that positive changes to regulatory targets' perceptions of friendship and trust with agents were largely due to positive changes to the targets' affect. For agents, positive changes to their own affect accounted for positive changes to their perceptions of friendship with targets, and partially accounted for positive changes to their perceptions of trust. The mediated pathways that we found generally accounted for a large proportion of the relationships between interpersonal

affect regulation and perceptions of relationship quality, but not the entire relationship. Thus, a change in affect may not be a *necessary* condition of a change in perceptions of friendship and trust (e.g., even an unsuccessful affect-improving attempt might make the target feel valued and the agent feel needed, and both of these states could contribute towards perceptions of friendship and trust). Nevertheless, the sizes of the mediated effects that we found suggest that change in affect is a major pathway through which changes in perceptions of relationships occur.

Our findings suggest that emotional contagion was unlikely to be a primary driver of observed effects of interpersonal affect regulation on regulatory agents' reports of relationship quality (changes in targets' affect did not mediate the effects of interpersonal affect regulation on agents' reports of their relationships, and there was relatively weak evidence that changes in targets' affect were responsible for the effects of interpersonal affect regulation on agents' affect; see Footnote 1). The effects of interpersonal affect regulation on regulatory agents may therefore be better explained by targets' behavioral feedback to interpersonal affect regulation (Côté, 2005), agents' facial expressions of emotion during regulation attempts (Buck, 1980), or agents' anticipation of targets' responses to interpersonal affect regulation (Van Kleef, 2009).

Study 2 provided more support for a relationship between interpersonal affect regulation and trust compared with Study 1. This may be due to the nature of the prison setting. As a low trust type of organization (Liebling & Arnold, 2005), there may have been more scope to develop a trusting relationship through affect-improving attempts in the prison compared with the relatively high trust grocery store. Overall, the results of this study suggest that interpersonal affect regulation may play a vital role in winning friendship and trust in a context where high-quality relationships are important. Furthermore the findings provide evidence that a major reason for this effect is that interpersonal affect regulation improves the affect of those involved.

General discussion

Across two studies, we examined whether an agent's deliberate attempts to improve a target's feelings shape how both perceive the quality of the relationship between them in terms of friendship and trust. Study 1 found preliminary evidence of a link between agents' use of affect-improving interpersonal affect regulation and targets' and agents' perceptions of relationship quality. Study 2 provided additional evidence for this link, indicating support for a longitudinal relationship. Study 2 further suggested that positive changes to regulatory targets' and agents' affect were largely responsible for the positive changes to relationship quality.

The finding that interpersonal affect regulation can help to build and maintain high-quality relationships extends the known implications of interpersonal affect regulation to the domain of social relations. While effects of interpersonal affect regulation on the quality of relationships had previously been theorized (Williams, 2007) and discussed in highly specific qualitative studies (Thoits, 1996), our studies are the first to empirically test the relational effects of interpersonal affect regulation. We found evidence for these effects in two distinct settings and with respect to two different features of high-quality relationships. We also observed effects of interpersonal affect regulation on both regulatory targets' *and* agents' perceptions of the quality of their relationships. Our findings therefore offer a broader account of the effects of interpersonal affect regulation on relationships than was previously available.

Our findings further extend existing research by highlighting a likely mechanism through which interpersonal affect regulation influences people's perceptions of relationship quality. In line with theories of emotion communication (e.g., Van Kleef, 2009) and cognitive-processing theories of emotion (e.g., Schwarz & Clore, 1983), we anticipated that positive changes to regulatory targets' and agents' affect arising from the use of interpersonal affect regulation would mediate the effect of the regulation effort on perceptions of relationship quality. The results of Study 2 supported this, suggesting that a large proportion of the observed associations between

interpersonal affect regulation and perceptions of relationship quality was explained by changes in affect. Because we assessed affect in a dyadic manner, examining how each network member had made each participant feel, the results support the idea that changes to agents' affect and thus their perceptions of relationship quality are dependent upon feedback from the dyadic connection, a finding that is consistent with Côté's (2005) social interaction theory. Despite strong support for affect as a pathway through which interpersonal affect regulation influences perceptions of relationship quality, our findings indicate that changes in affect may not be the only pathway; instead, other mechanisms may be involved. For instance, an agent's use of interpersonal affect regulation may increase perceptions of social obligation and so instigate reciprocation from the target (see, e.g., Lively, 2000), in turn helping to build a cooperative relationship. Alternatively, by transmitting information about the agent's goals and attitudes (Parkinson, 1996), interpersonal affect regulation might directly cause positive appraisals of the agent on the part of the target. Such alternative mechanisms should be considered in future research.

The replication of our core findings across two highly distinct contexts lends generalizability to the associations that we have reported. Yet there were some inconsistencies with respect to the role played by interpersonal affect regulation in influencing trust across the two studies. In particular, we found much stronger evidence for links between interpersonal affect regulation and trust in the prison (Study 2) compared to the grocery store (Study 1). These results could mean that interpersonal affect regulation is only of use building trust in contexts where trust is harder won. However, it is noteworthy that in the current study we simply assessed the presence or absence of friendship and trust. In reality, it may be the case that use of interpersonal affect regulation in already-established friendships or trusting relationships (e.g., within peer friendship groups) could help to forge more intense bonds, or prevent the decay of such bonds. The studies reported in this paper therefore provide a conservative first test of our hypotheses, as they indicate that simply using interpersonal affect regulation may be enough to form a new tie of

friendship or trust. Future research examining the intensity of relationship qualities would build on our studies by helping to determine whether interpersonal affect regulation can strengthen existing high-quality relationships, or whether it is primarily of use in forging new bonds.

Our findings contribute to the wider literature concerning how high-quality relationships, which are important social resources and core components of social capital that have implications for people's ability to perform at work and to flourish psychologically (Dutton & Heaphy, 2003), are formed and maintained. Our research indicates that trying to improve others' feelings has clear relational benefits, primarily due to the impact of interpersonal affect regulation on agents' and targets' affect. Thus, we provide a counterpoint to cognitive theories (e.g., DeScioli et al., 2011) in highlighting the importance of affect in the process of relationship development.

One outstanding question is whether all attempts to regulate others' feelings help to form close bonds? Unfortunately, we suspect not. Attempts to improve others' affect may be used to achieve a range of broader social goals, including providing support or care as well as instrumental gains, and regulatory targets' appraisals of the agents' motives behind such attempts may not always be positive. In cases where the target does not positively appraise the agent's motives, interpersonal affect regulation may fail to accrue relational benefits. For instance, as shown in Study 2, attempts to improve others' affect that are enacted outside of reciprocated friendships are somewhat less likely to lead to positive perceptions of the relationship, potentially because the target does not appraise the agent's motives positively. Similarly, attempts to worsen others' affect (e.g., people trying to make their partners feel guilty, Vangelisti, Daly, & Rudnick, 1991) may result in targets negatively appraising agents' actions or responding to the regulatory attempt with negative feedback, and so may fail to yield positive relational consequences. Thus there may be boundary conditions for the relational benefits of interpersonal affect regulation and these warrant further research.

Despite these potential boundaries, our results indicate the value to relationships of attempting to improve others' affect. Friendships and trust may be used as resources to help deal with everyday demands in grocery stores and other service organizations (Dormann & Zapf, 2004) and may help to mitigate poor psychological well-being and to facilitate positive therapeutic outcomes in prison contexts (Genders & Player, 1995). Relationship-building would also be useful in settings where high-quality relationships are difficult to form or are compromised, e.g., mergers between two organizations or marital therapy. Interpersonal affect regulation interventions in these settings could therefore serve an extremely practical purpose.

Limitations

The studies presented have three main limitations. First, even though relationship quality is usually viewed as a consequence of affect regulation (e.g., Gross, 2002), the direction of causality in the associations reported in the current studies is ambiguous due to the correlational research design. The longitudinal findings of Study 2 were consistent with the idea that using interpersonal affect regulation positively influences relationship quality, but these findings alone are not sufficient to draw conclusions about causality. Similarly, the direction of our mediation can be questioned; while pleasant affect can bolster perceptions of high-quality relationships as we argue in this paper, people who have high-quality relationships also tend to experience more pleasant affect (e.g., Jones & George, 1998). Thus, it is possible that the associations between affect and relationship quality we reported in Study 2 reflect the reverse causal explanation. Further research, using quasi-experimental or intervention designs, is needed to confirm the causal direction of the relationships established in this research.

Second, our use of self-reports to measure interpersonal affect regulation could be considered problematic, in terms of accuracy and artificial inflation of correlations arising from common method bias or a halo effect (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

However, the validation of the interpersonal affect regulation scale using other-reported data in Study 2 encourages confidence in the accuracy of this measure. Moreover, evidence that self-reported use of regulation was related to others' relationship evaluations in both studies – with measures taken on two different occasions one month apart in Study 2 – suggests that the links we found between interpersonal affect regulation and high-quality relationships are highly unlikely to be the result of methodological biases like individual differences in reporting style.

Third, results of the research should be interpreted somewhat cautiously due to the relatively low response rates in Study 2. Response rates were low, especially at Time 2, due to a combination of difficulties associated with performing research in a context that involves incarcerated people. Non-responses in social network research are most problematic when the researcher is interested in properties of the network as a whole, but even when looking at the relationship-level, as in the current research, data may be compromised due to loss of information and statistical power and, most importantly, bias (Stork & Richards, 1992).

Conclusion

In 1936, Dale Carnegie's book "How to Win Friends and Influence People" implied that individuals can influence others' behavior and win people round to their way of thinking by making others trust and like them. Our results indicate that influencing people – or at least trying to influence their feelings – could be a successful tactic for winning friendship and trust. The everyday social process of interpersonal affect regulation may, therefore, have an important role to play in the formation of high-quality social and working relationships.

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Footnotes

1. Additional analyses indicated little evidence that emotional contagion was responsible for the effects on agents' affect. Specifically, mediation analyses revealed that even in the presence of the potential mediator of targets' affect at T2, interpersonal affect regulation was still a significant predictor of agents' affect at T2 ($\beta = .12, p < .01$). Although targets' affect at T2 did significantly predict agents' affect at T2 in this model ($\beta = .06, p < .01$), suggesting partial mediation, the indirect effect was small, accounting for just 6% of the relationship between interpersonal affect regulation and agents' affect.

Table 1. Descriptive statistics and QAP correlations between main study variables in Study 1 (N = 930)

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|------------------------------------|------|------|-----|------|-------|-------|-------|------|
| 1. Gender similarity | 0.51 | 0.12 | - | | | | | |
| 2. Tenure difference (in years) | 2.98 | 1.47 | .01 | - | | | | |
| 3. Interpersonal affect regulation | 0.14 | 0.27 | .02 | -.03 | - | | | |
| 4. Friendship (targets' reports) | 0.29 | 0.45 | .03 | -.03 | .19** | - | | |
| 5. Friendship (agents' reports) | 0.29 | 0.45 | .03 | -.03 | .48** | .25** | - | |
| 6. Trust (targets' reports) | 0.55 | 0.50 | .04 | -.11 | .06 | .30** | .08 | - |
| 7. Trust (agents' reports) | 0.55 | 0.50 | .04 | -.11 | .18** | .08 | .30** | .13* |

Note: * $p < .05$; ** $p < .01$.

Note: Mean values represent mean ties per cell in the matrix (e.g., the mean tenure difference between pairs of respondents was 2.98 years). Mean values for interpersonal affect regulation and relationship qualities therefore indicate the average proportion of others in the network who received a tie (e.g., participants trusted on average 55% of others in their network).

Table 2. Effects of interpersonal affect regulation on relationship quality in Study 1 (N = 930)

| | Model 1. | Model 2. | Model 3. | Model 4. |
|--|-----------------------------------|------------------------------|----------------------------------|-----------------------------|
| | Targets' reports of friendship | Targets' reports of trust | Agents' reports of friendship | Agents' reports of trust |
| Predictors | | | | |
| Gender similarity | .03 | .04 | .02 | .04 |
| Tenure difference | -.03 | -.11 | -.02 | -.11 |
| Interpersonal affect regulation | .19** | .06 | .48** | .18** |
| ΔR^2 when interpersonal affect regulation is added | .04** | .02 | .22** | .04** |

*Note: * $p < .05$; ** $p < .01$.*

Table 3. Descriptive statistics and QAP correlations between main study variables in Study 2 (N = 802)

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--------------------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. Gender similarity | 0.78 | 0.42 | - | | | | | | | | | | | | | | |
| 2. Tenure difference (in years) | 3.14 | 4.72 | -.03 | - | | | | | | | | | | | | | |
| 3. Status similarity | 0.61 | 0.49 | .29** | -.05 | - | | | | | | | | | | | | |
| 4. Interpersonal affect regulation | 0.25 | 0.32 | -.02 | -.05 | .17** | - | | | | | | | | | | | |
| 5. Targets' affect T1 | 0.14 | 0.31 | -.11* | .01 | .05 | .30** | - | | | | | | | | | | |
| 6. Agents' affect T1 | 0.14 | 0.31 | -.11* | .01 | .05 | .36** | .16** | - | | | | | | | | | |
| 7. Targets' affect T2 | 0.14 | 0.30 | -.13* | .02 | -.03 | .27** | .42** | .15** | - | | | | | | | | |
| 8. Agents' affect T2 | 0.14 | 0.30 | -.13* | .02 | -.03 | .30** | .15** | .44** | .18** | - | | | | | | | |
| 9. Friendship (targets' reports) T1 | 0.13 | 0.34 | -.01 | .20** | -.03 | .29** | .42** | .24** | .23** | .17** | - | | | | | | |
| 10. Friendship (agents' reports) T1 | 0.13 | 0.34 | -.01 | .20** | -.03 | .40** | .23** | .39** | .15** | .27** | .27** | - | | | | | |
| 11. Trust (targets' reports) T1 | 0.30 | 0.46 | -.06 | .07 | .03 | .24** | .40** | .21** | .27** | .19** | .34** | .18** | - | | | | |
| 12. Trust (agents' reports) T1 | 0.30 | 0.46 | -.06 | .07 | .03 | .33** | .21** | .41** | .18** | .25** | .18** | .34** | .10* | - | | | |
| 13. Friendship (targets' reports) T2 | 0.16 | 0.37 | .04 | -.05 | .18** | .21** | .23** | .17** | .42** | .16** | .45** | .23** | .22** | .17** | - | | |
| 14. Friendship (agents' reports) T2 | 0.16 | 0.37 | .04 | -.05 | .18** | .30** | .17** | .22** | .19** | .38** | .27** | .45** | .16** | .23** | .23** | - | |
| 15. Trust (targets' reports) T2 | 0.30 | 0.46 | -.06 | .01 | .01 | .20** | .29** | .24** | .42** | .20** | .24** | .15** | .46** | .18** | .33** | .15** | - |
| 16. Trust (agents' reports) T2 | 0.30 | 0.46 | -.06 | .01 | .01 | .34** | .22** | .29** | .19** | .42** | .15** | .24** | .19** | .47** | .15** | .33** | .19** |

Note: * $p < .05$; ** $p < .01$. Mean values represent mean ties per cell in the matrix (e.g., the mean tenure difference between pairs of

respondents was 3.14 years). Mean values for interpersonal affect regulation, affect, and relationship qualities therefore indicate the average

proportion of others in the network who received a tie (e.g., participants trusted on average 30% of others in their network at T1).

Table 4. Direct and indirect effects of interpersonal affect regulation on relationship quality in Study 2 (N = 802)

| | Model 1. Targets' reports of friendship T2 | | Model 2. Targets' reports of trust T2 | | Model 3. Agents' reports of friendship T2 | | Model 4. Agents' reports of trust T2 | | Model 5. Targets' affect T2 | Model 6. Agents' affect T2 |
|---------------------------------------|--|--------------|---------------------------------------|--------------|---|--------------|--------------------------------------|--------------|-----------------------------|----------------------------|
| Predictors | Step 1 | Step 2 | Step 1 | Step 2 | Step 1 | Step 2 | Step 1 | Step 2 | | |
| Gender similarity | -.02 | .01 | .03 | .05 | .01 | .02 | -.01 | .01 | -.04 | -.03 |
| Tenure difference | -.01 | -.01 | -.01 | -.01 | -.01 | -.01 | .01 | -.01 | .01 | .01 |
| Status similarity | .09* | .11* | -.06* | -.05 | .06* | .08* | -.06* | -.05* | -.03 | -.04 |
| Corresponding relationship quality T1 | .50** | .47** | .50** | .39** | .45** | .43** | .39** | .34** | | |
| Interpersonal affect regulation | .08* | .01 | .13** | .04 | .15** | .07 | .32** | .22** | .16** | .17** |
| Targets' affect T1 | | .13* | | .04 | | | | | .41** | |
| Targets' affect T2 | | .42** | | .43** | | | | | | |
| Agents' affect T1 | | | | | | -.13** | | -.02 | | .35** |
| Agents' affect T2 | | | | | | .43** | | .45** | | |
| Size of indirect effect | | .84 | | .53 | | .49 | | .24 | | |

Note: * $p < .05$; ** $p < .01$. Effect sizes are not computed in DAMN. 'Corresponding relationship quality T1' refers to the T1 measure of the target/agent report of the particular relationship quality (friendship/trust) used as the dependent variable in the analysis.

Table 5. Supplementary analyses exploring the moderating role of reciprocity (N = 802)

| | Model 1. Targets' reports of friendship T2 | Model 2. Targets' reports of trust T2 |
|---|---|--|
| Predictors | | |
| Gender similarity | -.04 | -.03 |
| Tenure difference | .01 | .01 |
| Status similarity | .12** | -.06 |
| Interpersonal affect regulation | .04** | .04** |
| Reciprocation of friendship T1 | .36** | |
| Reciprocation of trust T1 | | .45** |
| Interpersonal affect regulation X Reciprocation of friendship T1 | .11** | |
| Interpersonal affect regulation X Reciprocation of trust T1 | | .03 |

Note: * $p < .05$; ** $p < .01$.

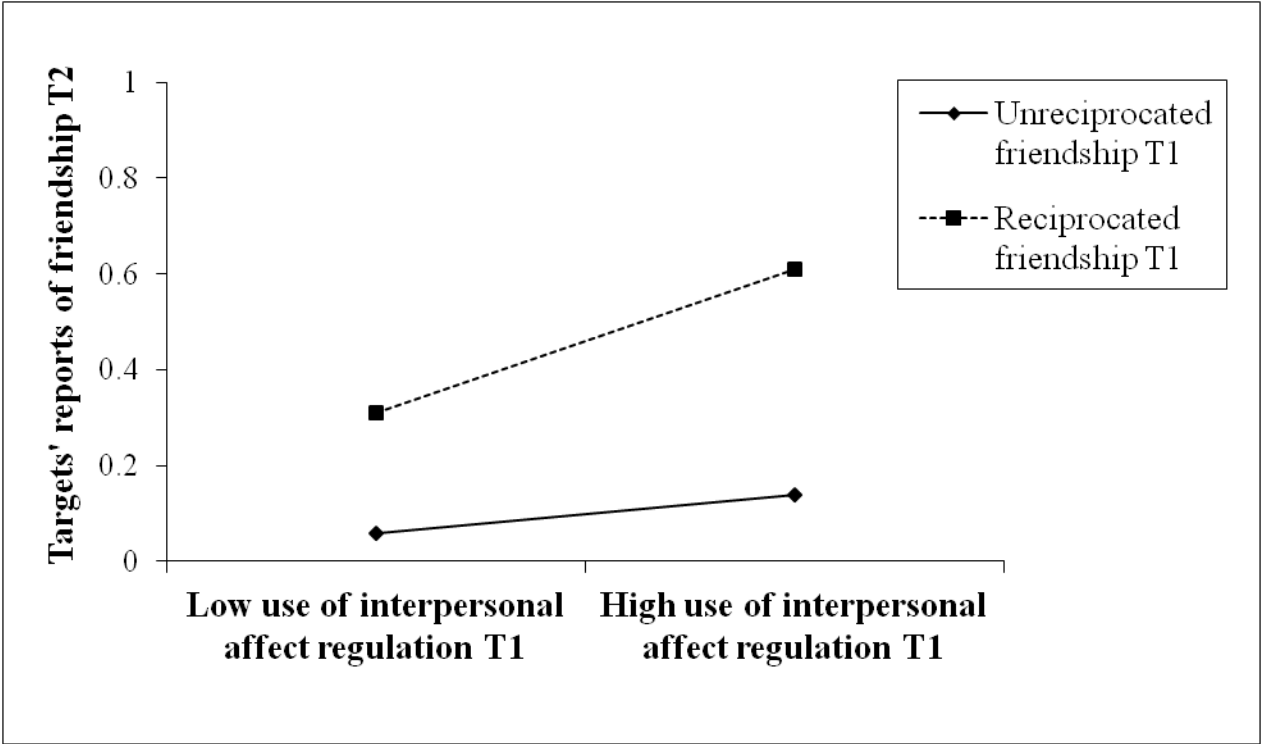
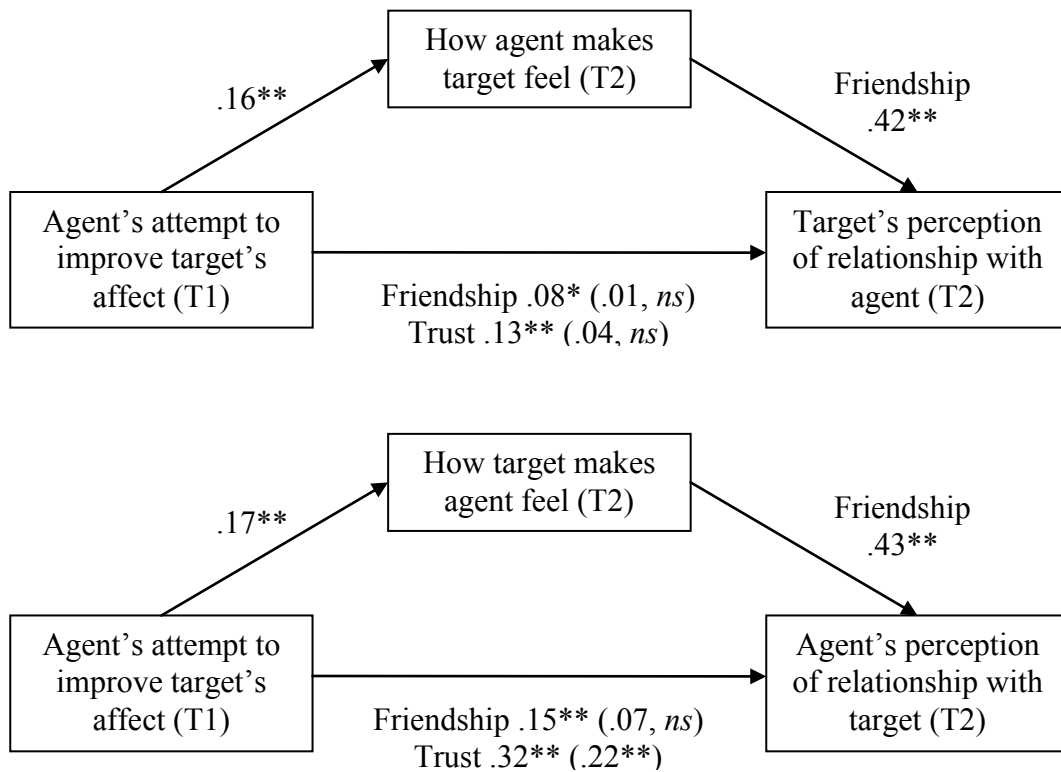


Figure 1

Interaction between interpersonal affect regulation and friendship reciprocation in Study 2



.01.

Figure 2. Mediation analysis in Study 2

Note: Statistics in brackets represent the relationship between independent and dependent variables when the mediator variable is added to the analysis. * $p < .05$; ** $p <$

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