

I do not know you and I am keeping it that way: Attachment avoidance and empathic accuracy in the perception of strangers

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Abstract

Two studies examined the association between attachment avoidance and empathic accuracy when perceiving strangers. In Study 1, participants with high attachment avoidance revealed lower accuracy in identifying the thoughts and feelings of their interaction partner compared with participants with low attachment avoidance. High-avoidance participants also tended to mentally distance themselves from the other and thought less often about him or her. Study 2 replicated the pattern of lower empathic accuracy for high-attachment-avoidance participants, this time, when respondents did not actually interact with the target of perception. We discuss reasons for why people with high attachment avoidance might show impaired empathic accuracy while interacting with strangers. We also consider more general influences of attachment avoidance on perception processes and, consequently, on social success.

Previous research reveals that attachment avoidance is related to an increase in interpersonal difficulties (Bartholomew & Horowitz, 1991; Horowitz, Rosenberg, & Bartholomew, 1993) and increased feelings of loneliness (Hecht & Baum, 1984; Kobak & Sceery, 1988; Wei, Shaffer, Young, & Zakalik, 2005; Wei, Vogel, Ku, & Zakalik, 2005). Significantly, there are indications that for individuals who are characterized by high attachment avoidance, such difficulties come into play even in their first encounter with others (Aron,

Melinat, Aron, Vallone, & Bator, 1997). This suggests that attachment avoidance might influence interpersonal interactions from the very beginning. Our study investigates what might go wrong in the interpersonal interactions of high avoiders.

Attachment theory

According to Bowlby's attachment theory (1969, 1973, 1988), people can be classified according to their working models of attachment, which are internal representations of the self and others. These representations are the product of past experiences with meaningful others: parents, siblings, friends, and partners (Creasey & Ladd, 2005; Feeney & Noller, 1996; Fraley, 2007; Hazan & Shaver, 1987; Mikulincer et al., 2001; Mikulincer, Shaver, Gillath, & Nitzberg, 2005; Overall, Fletcher, & Friesen, 2003; Ross & Spinner, 2001). Internal working models of attachment might be described by two dimensions: attachment anxiety and attachment avoidance (Brennan, Clark, & Shaver, 1998; Gillath et al., 2005; Nofle & Shaver, 2006). For

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ease of communication we shall refer to them in this article as anxiety and avoidance, respectively.

Although the two dimensions are continuous, they are often described and understood in terms of binary splits (Bartholomew & Horowitz, 1991; Feeney & Noller, 1996). Individuals with low anxiety and low avoidance are considered to be *securely attached* to others. These people feel comfortable with closeness, intimacy, and dependency, and can trust others. They view themselves as basically good and others as basically supportive. Individuals with high anxiety and low avoidance, also named preoccupied (Bartholomew & Horowitz, 1991), feel insecure, crave closeness, fear rejection, and have chronic anxiety concerning relationships with others.

The other two groups consist of individuals with high attachment avoidance. Individuals with high avoidance and high anxiety, named fearful avoidant (Bartholomew & Horowitz, 1991), consider themselves unlovable and others as untrustworthy and rejecting. By avoiding close involvement with others they protect themselves against the anticipated rejection. Individuals with high avoidance and low anxiety, termed dismissive avoidant (Bartholomew & Horowitz, 1991), consider themselves as worthy of love but others as disappointing. They protect themselves against disappointments by avoiding close relationships and maintaining their sense of independence and invulnerability (Burge Hammen, Davila, & Daley, 1997; Hamama-Raz & Solomon, 2006; Hazan & Shaver, 1987; Mikulincer & Shaver, 2005a; Mikulincer, Shaver, & Pereg, 2003).

High avoiders (with either high or low anxiety) cope with their insecurities regarding attachment and potential disappointment by rigidly relying on themselves. They do not feel comfortable with intimacy and, consequently, they prefer emotional distance from others. Mikulincer, Shaver, and colleagues (2003) proposed that due to their past experience with unresponsive attachment figures, high avoiders have learned to deactivate their attachment needs. That is, they engage in a strategy of deactivated attachment that is characterized by diversion

of attention away from distress-provoking stimuli and from attachment-related thoughts and feelings. Such a deactivation strategy has a broad influence on their relationships with close others as well as with new acquaintances (Hazan, & Shaver, 1987; Hess, 2002; Mikulincer, Orbach, & Iavnieli, 1998; Mikulincer & Shaver, 2005a; Mikulincer, Shaver, et al., 2003). In their relationships with close others, high avoiders show maladaptive conflict resolution behaviors including excessive anger and resentment (Kobak & Hazan, 1991; Wampler, Shi, Nelson, & Kimball, 2003). They show limited interest in knowing their partner's intimate thoughts and feeling (Rholes, Simpson, Tran, Martin, & Friedman, 2007), and they tend to be unsupportive of their partners (Rholes, Simpson, & Orina, 1999; Simpson, Rholes, Orina, & Grich, 2002). These behaviors might be linked to their perception of others because high avoiders also tend to view their *partners* as unsupportive and report low relationship satisfaction (Brennan & Shaver, 1995; Tucker & Anders, 1999).

The interpersonal difficulties of high avoiders occur not only in their contacts with close others but also in the early stages of evolving relationships and even in first encounters with strangers. Indeed, it has been argued that high avoidance interferes with the formation of intimacy and the creation of close social relations (Aron et al., 1997; Feeney, 1994, 2002; Shaver, Schachner, & Mikulincer 2005; Sibley & Liu, 2006). This article investigates a particular mechanism through which avoidance might interfere with the development of closeness and the formation of social relationships. This mechanism manifests itself in a low sensitivity of high avoiders to the thoughts and feelings of their interaction partners—impaired empathic accuracy.

Empathic accuracy

Empathic accuracy has been defined as the ability of a perceiver to accurately identify the internal thoughts and feelings of other people (Ickes, 1997). Clearly, having the ability to successfully “read minds” increases people's

social adjustment in all phases and roles, either with close others or with strangers (Jackson & Carr, 1955). It has been proposed that empathic accuracy is essential for “social intelligence” (Baron-Cohen, 1993; Hughes & Leekman, 2004; Ickes, Gesn, & Graham, 2000; Riggio, Tucker, & Coffaro, 1989). Accordingly, people with high empathic accuracy are supportive friends and partners, good advisors, effective negotiators, productive salespersons, and insightful therapists (Ickes, 1997; Ickes et al., 2000). In part, this follows from the reactions of their interaction partners. When someone’s thoughts and feelings are perceived correctly, the target of perception feels understood and, consequently, he or she wants to get closer to the perceiver, which further facilitates the perceiver’s empathic accuracy (Simpson, Ickes, & Grich, 1999).

The perception of the other’s thoughts and feelings might be decomposed into three major sources of variance that correspond to (a) perceiver–target acquaintanceship (Colvin & Funder, 1991; Colvin, Vogt, & Ickes, 1997; Funder & Colvin, 1988; Hall & Schmid, 2007; Hancock & Ickes, 1996; Ickes & Simpson, 1997; Stinson & Ickes, 1992), (b) characteristics of the perceiver (Davis & Kraus, 1997), and (c) readability of the target, which reflects the target’s tendency to express his or her thoughts and feelings (Zaki, Bolger, & Ochsner, 2008). The first source of variance, perceiver–target acquaintanceship, is by definition irrelevant in cases involving perception of strangers, in which perceivers cannot use prior knowledge (Biesanz, West, & Millevoi, 2007; Borkenau & Liebler, 1993; Kenny, 1991, 2004; Park, Kraus, & Ryan, 1997). As a result, perceptions of strangers are influenced to a great extent by the characteristics of the perceiver and the readability of the target (Colvin et al., 1997; Zebrowitz & Collins, 1997). Attachment avoidance might affect both of these components.

Empathic accuracy and avoidance

Due to their self-reliant style, high avoiders show less interest and involvement during interpersonal interactions (Kane et al., 2007;

Mikulincer & Nachson, 1991; Mikulincer, Shaver, et al., 2003). In particular, they tend to increase psychological distance from others (Hazan & Shaver, 1987; Mikulincer et al., 1998; Mikulincer, Shaver, et al., 2003). Psychological distance can be attained by increasing not only the physical distance from the other but also the mental distance (Hess, 2002).

Hess (2002) discusses several strategies that allow individuals to increase or decrease their psychological distance from others. Among the distance-increasing strategies Hess includes (a) perceiving dissimilarity between the individual and an interaction partner, (c) showing interpersonal negative feelings, (c) hiding information about one’s self, (d) derogating the other person, and (e) disregarding the other’s messages. Conversely, distance-decreasing strategies include (a) perceiving similarity between the individual and an interaction partner, (b) showing interpersonal positive feelings, (c) showing an intention or willingness to share things with the interaction partner, and (d) acknowledging or considering the partner’s messages.

A specific distance strategy, the perceiver’s *interest* in the other, should especially matter for empathic accuracy. When perceivers are uninterested in their targets while interacting with them, accuracy should decrease. Interest in another person can be expressed by how much one thinks about the other spontaneously. In this research, we assess the extent to which perceivers think about their interaction partners and term this measure “focus on the other.” We hypothesize that the focus on the other has a special status as a psychological distance strategy, in terms of its effect on empathic accuracy.

In particular, perceivers vary in their tendency to focus on their interaction partner and in their inclination to actively engage in attempts to know him or her (Eisenberg, Murphy, & Shepard, 1997). These differences are particularly critical in encounters with strangers because being interested and gathering accurate information about the other is essential for being able to form a relationship with him or her. Because high avoiders tend to be aloof in social interactions by

using strategies to increase distance from the other (Hazan & Shaver, 1987; Hess, 2002; Mikulincer et al., 1998; Mikulincer, Gilath, & Shaver, 2002; Mikulincer, Shaver, et al., 2003), we hypothesize that high avoiders should have impaired ability to accurately read the other's thoughts and feelings. Moreover, their tendency to be distant from their interaction partner might cause the partners to increase their distance as well, which may reduce the partner's readability and willingness to share. This, in turn, may further reduce empathic accuracy (Pietromonaco, Rook, & Lewis, 1992; Zaki et al., 2008).

Indirect support for our hypothesis that high avoiders should be less accurate in reading the minds of others is suggested in studies that tested the relation between attachment and empathy. Though empathic accuracy and empathy have different theoretical meanings, they both involve an interest in the other and a sense of knowing his or her mind and inner feelings. Indeed, the correspondence between attachment and empathy was established in research. Specifically, it was found that at a young age, toddlers with insecure attachment to their parents show poorer performance on tasks that require awareness to the other's mind (Arranz, Artamendi, Olabarrieta, & Martin, 2002; Fonagy & Target, 1997; Sethi, Mischel, Aber, Shoda, & Rodriguez, 2000; Symons & Clark, 2000) and empathic concern (Van der Mark, Van IJzendoorn, & Bakermans-Kranenburg, 2002). Conversely, it was found that chronic or induced attachment security was positively related to empathy and prosocial behaviors (Gillath et al., 2005; Mikulincer & Shaver, 2005b; Mikulincer et al., 2001; Mikulincer, Gillath, et al., 2003; Mikulincer et al., 2005; Wayment, 2006). High avoidance, however, was negatively correlated with empathy and helping behavior (Joireman, Needham, & Cummings, 2001; Wayment, 2006). Indeed, Burnette, Davis, Green, Worthington, and Bradfield (2009) have recently proposed that high avoiders use strategies to increase their distance from others and that these strategies make it difficult for them to empathize with others.

There are also several studies that directly examined the relation between attachment

theory and empathic accuracy (Kobak & Hazan, 1991; Noller & Feeney, 1994; Simpson, Ickes, & Blackstone, 1995; Simpson et al., 1999; Tucker & Anders, 1999), all of which were concerned with romantic partners. Interestingly, these studies did not report associations between avoidance and empathic accuracy of romantic partners, and they reveal inconsistent findings about the direction of the association between *anxiety* and empathic accuracy. Specifically, Simpson and colleagues (1999) indicated that empathic accuracy increases with attachment anxiety, yet Simpson and colleagues (1995) and Tucker and Anders (1999) reported the opposite. The major goal of this study was to extend the scope of research on the relationship between attachment theory and empathic accuracy to include the perception of strangers, rather than only romantic partners.

The closeness of the relationship should be an important moderator of the links between anxiety, avoidance, and empathic accuracy. Unlike people with high avoidance, individuals with high anxiety typically show interest in others and do not tend to refrain from interacting with them (Feeney & Noller, 1996; Mikulincer, Shaver, et al., 2003). Furthermore, it has been suggested that anxiety plays a greater role in long-term relationships (especially romantic ones), whereas avoidance plays a significant role during the first stages of relationships, when intimacy and acquaintance are first being created (Feeney, 1994, 2002; Shaver et al., 2005; Sibley & Liu, 2006).

At a first glance, the suggestion that avoidance plays significant role during interactions with strangers may seem peculiar in light of studies on attachment and perceptual processing of emotional stimuli (Fraley, Niedenthal, Marks, Brumbaugh, & Vicary, 2006; Niedenthal, Brauer, Robin, & Innesker, 2002). Fraley and colleagues (2006), for example, showed participants with different attachment orientations short morph movies of strangers changing their emotional expressions. They found that individuals with high attachment anxiety were quicker to state that they had seen both the onset and the offset of different emotional expressions in stranger's

faces. These individuals were also more accurate in identifying particular facial expressions of strangers. Avoidance was not related to the duration or accuracy of the judgments. We believe that these findings are not contradictory of our hypothesis that avoidance and not anxiety would be relevant for empathic accuracy during interactions with first acquaintances because, as Fraley and colleagues noted, "the morph movie task may not be well suited to tapping the psychological processes underlying attachment avoidance" (p. 1185). It is possible that highly avoidant people perceive basic affective signals just as well as everyone else, but they do not necessarily act on that knowledge due to their tendency to stay distant and not to show interest in others. Accordingly, we propose that in the phase of getting to know the other and establishing a relationship, avoidance is more relevant to emotional experience than anxiety. Therefore, avoidance rather than anxiety ought to influence empathic accuracy during interactions with strangers.

Study 1

Study 1 used the *unstructured dyadic interaction* variant of the empathic accuracy paradigm (Ickes et al., 2000; Ickes, Stinson, Bissonnette, & Garcia, 1990). Briefly, dyads were unknowingly videotaped while supposedly waiting for the experiment to begin. Then, each participant viewed the recording of the interaction and was asked to stop the video recording whenever he or she recalled having had a specific thought or feeling and write down those thoughts and feelings. Later, the other participant, called the *perceiver*, viewed the tape. He or she was asked to stop the tape at the breakpoints at which his or her partner (the target) had stopped earlier. At every breakpoint the perceiver was asked to infer the target's thoughts and feelings. Empathic accuracy was indicated by similarity between the perceiver's assessment of the target's thoughts and feelings and the target's self-report (Stinson & Ickes, 1992).

Our theoretical analysis suggested that avoidance would be associated with reduced empathic accuracy. Therefore, our first and

central hypothesis was that participants with high avoidance would show reduced empathic accuracy when compared with participants with low avoidance. High or low avoidance was determined based on questionnaires, the details of which shall be presented below.

Study 1 also tested whether individuals characterized by high attachment avoidance tend to distance themselves from others more than low avoiders and whether this is associated with impaired empathic accuracy. Three aspects of this question were examined: First, we compared the use of psychological distance strategies by high- and low-avoidance participants.¹ Second, Study 1 attempted to manipulate the psychological distance between the interacting partners and investigate the relation between manipulated psychological distance and empathic accuracy. The rationale behind this was that the manipulated psychological distance between the interacting partners should be related to empathic accuracy in a way similar to the chronic tendency to maintain interpersonal distance, which presumably differentiates between high and low avoiders (Helgeson, Shaver, & Dyer, 1987; Hess, 2002; Mikulincer, Shaver, et al., 2003). Third, we compared how empathic accuracy is related to the distance strategies proposed by Hess (2002) and to the extent to which perceivers focused on their interaction partner. We hypothesize that high avoiders should differ from low avoiders in their distance strategies, as well as in their focus on the other. Moreover, we hypothesized that the strength of the relation between avoidance and empathic accuracy would be mediated by distance strategies and especially by the tendency to focus on the other.

1. When people with high anxiety are exposed to social or attachment-relevant input, or when they feel distress, they tend to cling to others and to decrease the psychological distance from them (Mikulincer, Shaver, et al., 2003). Therefore, although the focus of our article was avoidance and not anxiety, we also assumed that participants with high anxiety would use strategies to decrease psychological distance between them and their interaction partners.

Method

Participants

Eighty-four Israeli students (60 women)² participated in a two-phase study of “interpersonal perception” for 50 NIS (New Israeli Shekel, about US\$ 12) or course credit. Due to technical problems with the recording in the second phase of the study, 4 participants had to be excluded from the analyses.

Materials and procedure

The study was conducted in two sessions. During the first meeting, the participants completed a large battery of self-report questionnaires. The questionnaires were presented on a computer screen in a randomized order. The battery included Brennan and colleagues' (1998) Experience in Close Relationships questionnaire, which consists of two subscales tapping attachment anxiety and attachment avoidance. Eighteen items tapped anxiety (e.g., “I worry about my relationships”), and 18 items tapped avoidance (e.g., “I try to avoid getting too close to other people”). Participants rated the extent to which each item was descriptive of their feelings in close relationships on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*). For evidence about the reliability and validity of the scales, see Brennan and colleagues. In this study, Cronbach's alphas were .91 for the anxiety scale and .88 for the avoidance scale.

The participants completed additional self-report scales in a randomized order. The use of other measures allowed us to manipulate psychological distance between the perceiver and the target, as shall be detailed below, as well as to conceal our focus on attachment. These additional scales are not the focus of this study and, therefore, will not be further discussed. Once the participants had completed the questionnaires, they were rewarded, thanked, and informed that the experimenter would invite them to a second meeting.

The second phase of the study took place about 2 weeks later. Pairs of same gender,

previously unacquainted participants, were invited to a laboratory that included an interaction room and two isolated computer rooms. On arrival, participants were escorted to the separated computer rooms and were given preliminary instructions. They read that they were about to meet a person, who is stranger to them, for a short interaction, which would be filmed. They were also informed that they were participating in a study that aims to assess how accurately they perceive a person whom they do not know. The instructions emphasized the importance of sensitivity to others and of accuracy in interpersonal perception. Finally, participants were encouraged to do their best despite the stressful nature of the experiment.

Participants were then given one of two descriptions of their interaction partner (the descriptions were in fact the psychological distance manipulation). Participants in the *low psychological distance condition* were informed that they were about to meet a person similar to them in terms of personality characteristics and values. They read that this person was chosen due to a great resemblance between their answers to the questionnaires in the first phase. Participants in the *high psychological distance condition* were informed that they were about to meet a person different from them in terms of personality characteristics and values. They read that this person was chosen due to a great dissimilarity between their answers to the questionnaires in the first phase. However, in reality, no matching up between interaction partners was attempted, and the assignment of participants to either the low- or the high-distance condition was random (Montoya, Horton, & Kirchner, 2008).

Once the 2 participants had finished reading the instructions, they were both invited into the interaction room. The experimenter introduced them to each other and then left the interaction room saying that she would like to test the technical equipment and make sure that everything is working. At this point, the experimenter taped a 6-min spontaneous interaction between the participants while they were waiting for her to return. After 6 min, the experimenter stopped the recording and copied it to the two computers that were

2. Participants' gender had no influence in the different analyses and, therefore, will not be discussed further.

physically set up in separate rooms but were connected by an internal network.

Then, the experimenter led each participant into a separate room. Participants were informed that they had been videotaped during the time when they were waiting in the interaction room and that they were not informed about it so that the interaction would be spontaneous. Participants were asked to sign a consent form, agreeing to the use of the recorded interaction, and all of them did. Then, participants were given instructions for the first round of viewing. During this round they were instructed to focus on the thoughts and feelings they had experienced during the interaction.

First round of viewing. Following the procedures used in previous empathic accuracy studies (e.g., Stinson & Ickes, 1992), participants were asked to watch the tape of the interaction and to provide an account of all of the thoughts and feelings that they had experienced during the interaction. Specifically, each participant was asked to stop the videotape any time he or she remembered having experienced a specific thought or feeling. Participants were then instructed to (a) write down the exact time (minutes and seconds into the interaction) when each thought or feeling occurred, using a timer displayed on the monitor, (b) indicate whether each entry was a thought or a feeling,³ and (c) write down the contents of the thought or feeling (Ickes et al., 1990). Participants were guaranteed that their interaction partners would not have access to their reported thoughts and feelings. The participants recorded a mean of 6.73 thought and feeling entries ($SD = 2.73$), with a range from 3 to 14 entries.

Second round of viewing. Next, both participants were given a second set of thought and feeling forms. These forms included the times at which their interaction partner reported having had specific thoughts or feelings.

Participants were requested to view the tape again. During the second viewing, participants were instructed to stop the recording at the times marked by the other person and (a) write down what they thought the *other person* had been thinking or feeling at each specified point in time and (b) indicate whether each inferred entry was a thought or a feeling.

After they had finished the second round of viewing, participants answered the following questions,⁴ presented in a randomized order: (a) how much did they like the other person? (1 = *greatly disliked*, 7 = *greatly liked*), (b) how much, in their opinion, did the other person like them? (1 = *greatly disliked*, 7 = *greatly liked*), and (c) how similar to or different from them was the other person? (1 = *very different*, 7 = *very similar*) Then, the participants were thanked, debriefed, and rewarded.

Construction of the dependent measures

Empathic accuracy. Following a standard procedure (Ickes et al., 1990; Thomas, Fletcher, & Lange, 1997), empathic accuracy was operationally defined as the extent to which the perceiver's inferences about the specific content of the target's thought and feeling entries matched the target's reported content. Two independent coders, who were blind to the study's conditions, rated the degrees of similarity between the content reported by the target and the perceiver's inferences about the target. The comparison was conducted for each point in time where the target had stopped the video recording. These ratings served as the basis for the empathic accuracy index. The coders rated the degree of similarity at each stopping point on a 5-point scale that ranged from 0 (*essentially different content*) to 4 (*essentially the same content*). Coders' judgments yielded interrater reliabilities of .92. All disagreements were

3. In this research, the majority of participants found it hard to distinguish between thoughts and feelings. Therefore, we did not conduct separate analyses for thoughts and feelings when calculating the dependent variables.

4. See Table 1, in the Results section for statistical information regarding the answers that participants gave to these three questions. We used participants answers to the question "How similar or different was the other person from you?" to check our distance manipulation. The other two questions were not relevant for the main variables and findings and therefore were not discussed further.

resolved by discussion. The ratings of the perceiver's empathic accuracy were summed and divided by the number of stops to provide a mean score per participant.

Psychological distance strategies. The coders also read the content of the thoughts and feelings in the first round of viewing. They rated the thought or feeling at each stopping point on four psychological proximity strategies (strategies to reduce distance) and five psychological distance strategies (strategies to increase distance). These were based on Helgeson and colleagues (1987) and Hess (2002). Specifically, the proximity strategies included: (a) perceiving similarity between the participant and the interaction partner, (b) showing interpersonal positive feelings, (c) showing an intention or willingness to share things with the interaction partner, and (d) acknowledging or considering the partner's message. The distance strategies included: (a) perceiving dissimilarity between the participant and the interaction partner, (b) showing interpersonal negative feelings, (c) hiding information about one's self, (d) derogating the other person, and (e) disregarding the other's messages. Each strategy was rated for absence or presence (0 = *the thought/feeling did not reflect this strategy*, 1 = *the thought/feeling reflected this strategy*). Interrater reliabilities for each strategy were high (individual-item reliabilities ranged from .80 to .96). Alpha factor analysis (Kaiser & Caffrey, 1965) of the proximity strategies uncovered a single factor (eigenvalue = 5.67). Because of low common variance with the other variables, the strategy "willingness to share" was not included in the final analysis. The final ratings of the three remaining proximity strategies were summed for each participant to provide the proximity score. Alpha factor analysis of the distance strategies revealed, again a single factor (eigenvalue = 7.73). Because of low common variance with other distance strategies, "hiding information about the self" was not included in the final analysis. The final ratings of the four remaining distance strategies were summed for each participant to provide the distance score. Because of the low correlation

between the proximity factor and the distance factor ($r = -.33$), they were retained as separate scores in our analysis.

Focus on the other. The coders also made a global rating of the extent to which the entire corpus of thoughts or feelings involved or concerned the other. Ratings were made on a 9-point scale ranging from 1 (*not at all*) to 9 (*very*). Intercode reliability was .91.

Results

Table 1 contains the zero-order correlations between the experimental variables as well as the means and standard deviations of these variables.

Manipulation check

At the end of the experimental session, participants were asked to rate their similarity to the other person. Although participants in the low-distance condition rated the other as numerically more similar to them ($M = 3.85$) than those in the high-distance condition ($M = 3.50$), this difference failed to reach acceptable levels of significance, $t(78) = 1.24$, $p = .22$.

We also examined the distance, proximity, and focus-on-the-other measures which were extracted by the coders from participants' reports of their own thoughts and feelings. Here again, we found no evidence that the two conditions differed from each other in the psychological proximity measure, $t(78) = .73$, $p = .47$; the psychological distance measure, $t(78) = 0.61$, $p = .55$; or the focus-on-the-other measure, $t(78) = -1.68$, $p = .10$.

Avoidance and empathic accuracy

According to our central hypothesis, participants with high avoidance should be less empathically accurate compared with participants with low avoidance.⁵ To examine this

5. Before conducting any analysis that includes the empathic accuracy variable, we tested whether this variable was significantly different from zero in our sample. Empathic accuracy, $t(79) = 16.88$, $p < .01$, was significantly different from zero, meaning that participants were successful, on average, at perceiving strangers' thoughts and feelings.

Table 1. Means, standard deviations, and correlations among the major variables in Study 1

	Anxiety	Avoidance	EA	Proximity	Distance	Focus	Similarity	Liking	Liked by
	<i>M</i> = 3.48, <i>SD</i> = 1.09	<i>M</i> = 2.93, <i>SD</i> = 0.87	<i>M</i> = 1.04, <i>SD</i> = 0.55	<i>M</i> = 0.46, <i>SD</i> = 0.39	<i>M</i> = 0.57, <i>SD</i> = 0.42	<i>M</i> = 3.38, <i>SD</i> = 1.75	<i>M</i> = 3.68, <i>SD</i> = 1.27	<i>M</i> = 4.93, <i>SD</i> = 1.11	<i>M</i> = 4.19, <i>SD</i> = 1.08
<i>N</i> = 80									
Anxiety									
Avoidance									
EA									
Proximity									
Distance									
Focus									
Similarity									
Liking									

Note. EA = empathic accuracy; proximity = proximity strategies; distance = distance strategies; focus = focus on the other; similarity = perception of similarity to the other; liking = how much did you like the other?; liked by = how much, in your opinion, did the other liked you? Probability—two-tailed analysis: * $p < .05$. ** $p < .01$; one-tailed analysis: ^a $p < .05$.

hypothesis, we used a multiple regression model to predict empathic accuracy from anxiety and avoidance, $F(2, 77) = 3.18, p < .05, R^2 = .08$. In line with our hypothesis, avoidance was negatively associated with empathic accuracy, $\beta = -.28, t(77) = -2.51, p < .05$, indicating that high avoiders tended to have lower accuracy than those with low avoidance.⁶ Also, as expected, there was a virtually null association between anxiety and empathic accuracy $\beta = -.01, t(77) = -.04, ns$.

Psychological distance strategies

We started by testing whether participants with high avoidance showed an increased psychological distance from their interaction partners compared with low-avoidance participants. Although anxiety is not the focus of this article, we also tested whether participants with high anxiety differed from those with low anxiety. Specifically, using a regression analysis framework, we tested whether participants' proximity and distance scores were related to their anxiety and avoidance. The analyses of proximity strategies, $F(2, 77) = 5.31, p < .01, R^2 = .12$, revealed that higher avoidance was associated with a tendency to use fewer proximity strategies in the interactions, $\beta = -.22, t(77) = -2.01, p < .05$, while higher anxiety was associated with the use of more proximity strategies, $\beta = .25, t(77) = 2.31, p < .05$. Comparable analysis of the distance strategies score revealed that the overall model was not significant, $F(2, 77) = 1.93, p = .15, R^2 = .05, ns$. However, testing the specific regression coefficients revealed that high avoiders expressed more distance from their partners compared with participants with low avoidance, $\beta = .21, t(77) = 1.89, p < .05$, one tailed.⁷ Yet anxiety was not related to the distance score, $\beta = -.04, t(77) = -.33, p = .74$. Thus, our findings are consistent with the hypothesis that avoidance is associated with attempts to reduce proximity and increase distance, while anxiety is associated with attempts to increase proximity. Unexpectedly, neither the proximity score nor the

6. β stands for the standardized regression coefficient.
7. A one-tail test was used because our hypothesis was planned.

distance score was significantly related to empathic accuracy (see Table 1).

Focus on the other

Next, we tested whether the thoughts and feelings reported by participants with high avoidance were less focused on the other than those reported by participants with low avoidance. As hypothesized, when the focus-on-the-other measure was predicted from anxiety and avoidance in a multiple regression framework, $F(2, 77) = 3.35$, $p < .05$, $R^2 = .08$, higher avoidance was associated with a lower measure of focus on the other, $\beta = -.28$, $t(77) = -2.53$, $p < .05$. Anxiety, in contrast, was unrelated to the focus-on-the-other measure, $\beta = .03$, $t(77) = .24$, $p = .81$.

Next, we tested whether the extent of focusing on the other accounted for the impaired empathic accuracy displayed by high avoiders. That is, we investigated whether, unlike the aforementioned psychological distance strategies, the tendency of perceivers to focus on the other would be directly related to the perceiver's accuracy of perception. This was done using multiple regression mediation analysis (Baron & Kenny, 1986). According to this approach, a series of three regression equations were estimated. The first equation, described above, estimated the effect of avoidance on empathic accuracy, $F(2, 77) = 3.18$, $p < .05$, $R^2 = .08$. The second equation tested whether variations in avoidance significantly accounted for variations in the focus-on-the-other construct. Again, as described above, there was a significant negative relation between the two, $F(2, 77) = 3.35$, $p < .05$, $R^2 = .08$, such that participants with high avoidance showed a lesser degree of focus on their interaction partner compared with participants with low avoidance. The third equation involved a multiple regression model, predicting empathic accuracy by avoidance and focus on the other, $F(3, 76) = 3.82$, $p < .05$, $R^2 = .13$. If the focus-on-the-other construct is involved in the association between avoidance and empathic accuracy, the direct association between the latter two variables should decrease once the focus-on-the-other measure is included in

the regression equation. Indeed, when both the focus-on-the-other construct and avoidance score were used to predict empathic accuracy, the independent influence of avoidance on accuracy went down, while that of focus on the other was still positively related to empathic accuracy, as shown in Figure 1 (compare Model a to Model b).

The statistical significance of the indirect effect (mediation) was tested by using a bootstrap method (Kashy, Donnellan, Ackerman, & Russell, 2009; Preacher & Hayes, 2004; Preacher, Rucker, & Hayes, 2007). The indirect effect, linking avoidance to empathic accuracy through the focus on the other construct, was significantly negative, with a 95% confidence interval between -0.10 and -0.01 . Taken together, the results are consistent with the hypothesis that a high level of avoidance is associated with less focus on the other, and thereby, with impaired empathic accuracy.

Target readability

So far, our interpretation of the findings has been based on the assumption that perceiver's attachment style influenced his or her perception process. However, given the design of Study 1, there is an alternative route by which the perceiver's attachment style could influence empathic accuracy. Specifically, because of their tendency to remain more distanced, high-avoidance perceivers might have led their interaction partners to become less readable targets. The reduction in empathic accuracy, according to this interpretation, would reflect the reduced readability of the targets of perception, rather than the impaired perception processes of the perceivers.

As we mentioned in the Introduction, target readability has to do with the expressiveness of the target. Targets who are highly expressive tend to behave in accordance with their experienced cognitions and emotions, to speak about what they think, and to use facial expressions and body gestures in accordance with their emotions. Consequently, they can be perceived more easily and accurately than targets who have low readability (Mikulincer & Nachson, 1991; Zaki et al., 2008). If high-avoidance participants remain distant during

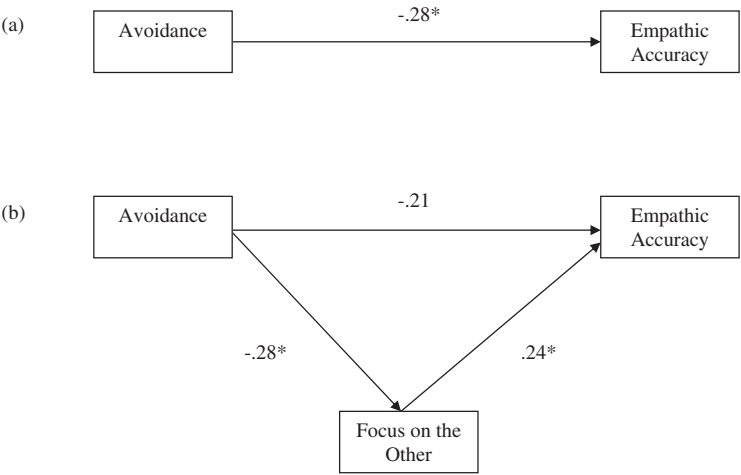


Figure 1. Results supporting hypothesized mediation.

Note. Shown are path diagrams with standardized regression coefficients for: (a) the model for the overall (unmediated) effect of avoidance on empathic accuracy, followed by (b) the model including the hypothesized mediator of focus on the other. Mediation is supported by the significant paths to and from the mediator, and also by the reduction to nonsignificance of the avoidance empathic accuracy association in this model as compared with the unmediated model (a). (The bootstrapping test supporting this interpretation is given in the text.

* $p < .05$.

interaction they might cause their targets to keep their distance too, which in turn may reduce the target's readability and willingness to communicate.

The conjecture that the reduced empathic accuracy of high-avoidance perceivers is due to their targets being less readable was investigated directly in Study 2. Below we tested a precondition of this conjuncture. Assuming that low readability is associated with extensive use of distancing strategies, we examined whether the distancing strategies of the *targets* influence the *perceivers'* empathic accuracy. To this end, we tested whether Study 1 targets, who showed expressions of greater distance, tended to be perceived less accurately.⁸ The results revealed a marginally significant negative relation between the perceiver's empathic accuracy and the target's distance strategies, $\beta = -.21$, $t(78) = -1.94$,

$p = .06$, $R^2 = .05$, and a virtually nil relation between the perceiver's empathic accuracy and the target's proximity strategies, $\beta = .02$, $t(78) = .19$, $p = .85$. Thus, Study 1 does not provide statistical evidence that the target's distance or proximity strategies influence perceivers' empathic accuracy. We return to this in the Discussion below.

Discussion

The results of Study 1 confirm our first and central hypothesis, namely, that avoidance is negatively related to empathic accuracy. Further, we found that this negative relation is mediated by the tendency to focus on the other. We also found that high avoiders tended to use less proximity strategies and more distance strategies (the relation between avoidance and distance strategies was only marginally significant). Our findings failed to show an influence of distance strategies on empathic accuracy. We think that this failure may be due to the general scope of the distance strategies. For instance, a perceiver

8. We also examined the relation between the *perceiver's* empathic accuracy and the *target's* attachment characteristics, anxiety, and avoidance. The overall regression model was not significant, $F(2, 77) = .46$, $p = .63$.

might have either positive or negative feelings toward the other but still have high empathic accuracy. More generally, the specific content of the thoughts and the feelings of the *perceiver* regarding the target should not be predictive of the accuracy of the perception. What matters, however, is the perceiver's *interest* in the other, a factor we termed the *focus on the other*. Our findings show that when perceivers were less interested in their targets while interacting with them, accuracy decreases.

The distance manipulation in Study 1 did not work. A possible explanation for the null results might be the issuing time of the manipulation. Namely, participants read that they were about to meet someone similar or different from them before the actual interaction. The empathic accuracy assignment was conducted after the interaction. This sequence of affairs might have caused participants to test the similarity, which was in fact random, during the interaction and to dismiss or alter it. Study 2 participants did not interact with the other person, and therefore were less able to test the similarity information themselves.

In Study 2, we further tested whether the relation between high avoidance and low empathic accuracy was due to perception processes. As we noted earlier, the design of Study 1 leaves open the question of whether the reduced empathic accuracy of high-avoidance participants reflects their perceptual processes or the readability of their targets. We attempted to start examining this question by reanalyzing the data from Study 1, as described above. The results made the change-in-readability mechanism less likely, because targets' distance and proximity strategies were not statistically related to empathic accuracy. However, a person's distancing strategies are an imprecise proxy of that person's readability. Therefore, it is necessary to test the possibility that the reduced empathic accuracy of high-avoidance participants reflects the readability of their targets using a stronger method. Study 2 was conducted for this purpose. In Study 2, perceivers rated a target without interacting with him or her. This procedure allowed us

to control for target readability by exposing a large group of participants, who varied in their degree of avoidance, to the same target.

Study 2

Study 2 controlled for the readability of targets by design. To do so we used a different variant of the empathic accuracy paradigm—the *standard stimulus*. Specifically, participants in Study 2 viewed one of two videotaped interactions, depending on the participant's gender (Gesn & Ickes, 1999; Ickes et al., 2000). Because in this paradigm all the same-gender perceivers viewed the identical target person, whose behavior could not have been influenced by them, target readability was kept constant (Zaki et al., 2008). We hypothesized that individuals with high avoidance would be less accurate than participants with low avoidance in detecting the thoughts and feelings of the target of perception, even when they had no opportunity to affect their partner, namely, when they were not a party to the interaction.

Method

Participants

Eighty Israeli students (61 women) participated in the experiment for 40 NIS (about US\$ 10) or course credit.

Construction of the stimulus videotapes

Eight people (4 males and 4 females), who answered an ad seeking individuals who were willing to be filmed for experimental purposes, were invited to the laboratory in same-gender pairs. They were filmed in a procedure identical to Study 1. They viewed their own video and were asked to stop it whenever they remembered having had a specific thought or feeling during the interaction. They wrote down the content of their thoughts and feelings, as participants in Experiment 1 did in their first round. From the four interactions, which involved eight protocols of the thoughts and feelings, two judges selected 2 target persons, a male and a female, to be the

Table 2. Means, standard deviations, and correlations among the major variables in Study 2

	Anxiety	Avoidance	EA	Similarity
<i>N</i> = 80	<i>M</i> = 3.72, <i>SD</i> = 1.02	<i>M</i> = 2.94, <i>SD</i> = 0.87	<i>M</i> = 0.50, <i>SD</i> = 0.30	<i>M</i> = 4.01, <i>SD</i> = 1.33
Anxiety		0.13	0.08	0.22*
Avoidance			−0.32**	−0.02
EA				0.04

Note. EA = empathic accuracy; similarity = perception of similarity to the other.

p* < .05. *p* < .01.

standardized targets in the actual experiment.⁹ Overall, the male target recorded six thought and feeling entries in his protocol and the female target recorded eight thought and feeling entries in her protocol, which was similar to the averages in Study 1. To allow comparison to Study 1, participants in Study 2 were exposed to a target person whose gender was identical to theirs.

Materials and procedure

Like Study 1, this study was conducted in two sessions. During the first session, participants completed the battery of self-report questionnaires. Two weeks later, participants were invited individually to the laboratory. On arrival, they were escorted to a computer room and read that they were participating in a study that aimed to assess how accurately they perceived a person whom they did not know.

Next, participants were given a modified version of the psychological distance manipulation. Participants in the low-distance manipulation were informed that they were going to view a videotaped conversation between two people whom they did not know. They were instructed which target to focus on and were informed that this target was chosen for them due to a great resemblance between their answers to the questionnaires in the first phase. Participants in the high-distance condition were informed that the target person was

chosen for them due to a great dissimilarity between their answers to the questionnaires in the first phase. In reality, however, all male perceivers were asked to focus on the same male target and all female perceivers on the same female target.

After having viewed the entire recorded interaction without any further instructions, perceivers were given a thought or feeling form containing the times at which the target reported having experienced specific thoughts or feelings. They were asked to view the tape again while focusing on the same target as before, this time following the empathic accuracy procedure. In other words, perceivers were to stop the video at the times the target stopped and write down what they thought the target had been thinking or feeling at that point.

After they had finished the thought and feeling inference protocol, participants indicated to what extent they found the target similar to or different from them. Ratings were made on a 7-point scale. The participants were then thanked, debriefed, and rewarded.

Results and discussion

Table 2 contains the correlations between the experimental variables along with the means and standard deviations of the variables.

Manipulation check

Participants in the low psychological distance condition (*M* = 4.30) viewed themselves as more similar to the target than those in the high psychological distance condition (*M* = 3.70), *t*(78) = −2.16, *p* < .05.

9. The specific targets were chosen based on their resemblance to the average student (by means of their declared interest topics and their appearance). That way, Study 2 participants could see themselves as both similar to and different from their target, which was important for the distance manipulation in the study.

*Avoidance and empathic accuracy*¹⁰

In order to test whether participants with high avoidance would be less accurate than participants with low avoidance, we tested a multiple regression model,¹¹ predicting empathic accuracy by anxiety, avoidance, and the psychological distance manipulation, $F(3, 76) = 3.54$, $p < .05$, $R^2 = .12$. As in Study 1, participants' level of avoidance was negatively associated with empathic accuracy, $\beta = -.34$, $t(76) = -3.12$, $p < .01$, suggesting that higher avoidance led to decreased empathic accuracy, even when perceivers could not have influenced the behavior of the targets. Also, as in Study 1, participants' level of anxiety was not significantly associated with empathic accuracy, $\beta = 0.13$, $t(76) = 1.22$, $p = .23$. Furthermore, although the distance manipulation influenced participants' perception of similarity to the other, it had no influence on empathic accuracy, $\beta = .08$, $t(76) = .70$, $p = .48$.

Auxiliary analysis

Participants' level of anxiety was associated with higher self-rated similarity to the observed target, $r(80) = .22$, $p < .05$. This effect may reflect attempts by individuals with high anxiety to reduce their psychological distance from the target (Helgeson et al., 1987; Hess, 2002). In contrast, we found no support for the suggestion that participants' avoidance was associated with increasing or decreasing similarity, $r(80) = -.02$, $p = .85$.

To summarize, the findings of Study 2 reinforced the conclusions drawn from Study 1, namely, that participants' high avoidance leads to reduced empathic accuracy. Moreover, because perceivers in Study 2 could not have influenced their target's behavior, the effect of avoidance on empathic accuracy must reflect reduced sensitivity in perception rather than induction of lower target

readability. Thus, although we cannot reject the possible influence of avoidance on target readability, Study 2 suggests that target readability does not explain the impaired empathic accuracy shown by high avoiders. The results also suggest that individuals with higher anxiety tended to reduce their psychological distance from others by perceiving themselves as more similar to them. Finally, even though the psychological distance manipulation in Study 2 was effective, we found that it had no influence on empathic accuracy. We return to this issue in the General Discussion.

General Discussion

Results from two experiments suggest that perceivers who were characterized as having high levels of attachment avoidance were less accurate than those with low levels of avoidance when attempting to report on the thoughts and feelings of individuals whom they had just met. Our findings also suggest that the impairment in accuracy was related to a decrease in high avoiders' inclination to focus on their interaction partners. This pattern is consistent with past research that suggests that high avoiders cope with their attachment insecurity by deactivation strategies that allow them to distance themselves from social information and contacts (Mikulincer & Shaver, 2005a; Shaver et al., 2005).

Our findings do not support a link between the other dimension of attachment—anxiety—and empathic accuracy. This null finding is important because it is consistent with the theoretical differences between avoidance and anxiety. Anxiety plays a greater role in long-term romantic relationships, whereas avoidance is especially important during the first stages of relationships, when intimacy and acquaintance are initially being formed (Feeney, 1994, 2002; Shaver et al., 2005; Sibley & Liu, 2006). More direct probes into the distance strategies of our participants revealed that participants with high anxiety used strategies to decrease psychological distance from their targets, while those with high avoidance actually tended to increase the psychological distance between them and their interaction partners by using less proximity

10. Here, too, we started by testing whether empathic accuracy was significantly different from zero. It was, $t(79) = 15.11$, $p < .01$, suggesting that participants were successful at perceiving the other's thoughts and feelings.

11. Because of the similar pattern of results for men and women, we combined the data to include both sexes.

strategies. These diverging patterns are diagnostic of the hyperactivation and deactivation of the attachment system by people with high anxiety and high avoidance, respectively, when interacting with others (Mikulincer & Shaver, 2005a; Mikulincer, Shaver, et al., 2003). We also found that high avoiders used more distance-increasing strategies; however, this finding was only marginally significant.

The two studies also manipulated psychological distance by suggesting to the perceivers that they were similar to or different from their interaction partners. We were not successful in manipulating the distance in Study 1, yet the distance manipulation was successful in Study 2. Although the difference in the effectiveness of the manipulation between the two studies requires further investigation, it is important to note that even when the manipulation did work, it failed to influence empathic accuracy. This reinforces the conjecture that perceivers' accuracy in reporting the thoughts and feelings of their interaction partners is affected by those mental constructs that tap interest in the other rather than constructs that merely reflect perceived similarity or dissimilarity to the other or perceived closeness to or distance from the other. We found additional support for this assumption in the null correlations between empathic accuracy and general psychological distance strategies, as opposed to a significant positive relation between empathic accuracy and the tendency to focus on the other person.

Our findings point to the complexity of the challenge that high avoiders face. Their attachment deactivating strategies are a solution to their need to minimize rejection and the painful feeling that goes along with the disappearance of others (Hazan & Shaver, 1987; Mikulincer et al., 1998). These strategies were useful if high avoiders were really uninterested in others. However, high avoiders are not indifferent to what other people think about them, and in fact, they too desire to be liked and accepted by others (Carvallo & Gabriel, 2006). By remaining aloof, they manage to protect themselves from the possibility of being hurt, but at the same time, they are impaired in their ability to accurately perceive

the other person. This, in turn, reduces their chances of getting involved with others and gaining their affection and acceptance (Ickes et al., 2000). Thus, there is a trade-off—being more distant not only implies greater protection from others but also less acceptance by them, whereas being less distant not only implies being more liked but also being more vulnerable to rejection and getting hurt.

This problem is especially significant in interactions with new acquaintances. Mutual understanding, which is associated with being empathically accurate, increases the chances of the formation of a social bond (Lun, Kesebir, & Oishi, 2008; Simpson et al., 1999). Moreover, when one reads the other's thoughts and feelings accurately, one is able to reinforce the other, thus providing mutual acceptance and liking (Ickes et al., 2000). Therefore, the pattern of reduced empathic accuracy shown by high-avoidance individuals might contribute to the deficits that high avoiders show in forming interpersonal relationships (Mallinckrodt & Wei, 2005). Reduced empathic accuracy during interactions with new acquaintances leads to poor understanding of the other person, which is likely to create a vicious cycle—the avoider becomes avoided.

Empathic accuracy bears strong resemblance to being aware of the other's way of thinking, which is also known as "theory of mind" (Baron-Cohen, 1993; Hughes & Leekman, 2004) or reflective function (Fonagy & Target, 1996, 1997). Eisenberg and colleagues (1997) suggested that theory of mind is a developmental achievement because it permits the child to perceive and behave not only according to others' overt behavior but also according to the conception of the other's beliefs, feelings, hopes, and desires. Research shows a clear developmental trajectory of this ability: By the age of 3, children distinguish between real entities and mental entities, which do not have behavioral-sensory properties and consistent existence (Wellman & Estes, 1986). Around 4–5 years of age, children are able to infer unobservable mental states in themselves and in others and to

use this mental state information in order to predict and explain behavior (Flavell, 1986).

According to developmental theorists, awareness of the other's mind is acquired through an early attachment between the toddler and meaningful caregivers, usually the parents (Arranz et al., 2002; Fonagy & Target, 1997; Sethi et al., 2000; Symons & Clark, 2000). In a secure parent-child attachment, the parent is sensitive and attuned to the child. This way, the caregiver is mirroring and containing the child's affective states. A secure attachment between a child and a caregiver contributes to the emergence of the child's capacity to conceive his or her own mind as well as the fact that the caregiver has a separate mind (Bowlby, 1969). Indeed, it was found that attachment security between mothers and children was related to good performance of the child in various theory-of-mind tasks (Arranz et al., 2002; Fonagy & Target, 1997). Accordingly, it might well be the case that the tendency to be guarded and to show less interest in the attachment figure influences attachment internal working models as well as the child's ability for empathic accuracy (Mikulincer, 1997).

This study found an association between empathic accuracy and attachment avoidance in interpersonal interactions among strangers. Future studies should strive to gain an additional understanding of the way avoidance affects perception processes in strangers. Specifically, research should explore whether high avoiders are indeed less capable of inferring other's thoughts and feelings or whether they are as capable as low avoiders but are less motivated to perceive others accurately (Eisenberg et al., 1997; Halberstadt, 1991). In order to further investigate the ability versus motivation hypothesis, future studies should examine the influence of the features of various situations on the relation between avoidance and empathic accuracy (Mischel, 2004; Mischel & Shoda, 1995). Also, research might be able to determine whether high avoiders are sensitive to environmental contingencies, so that they increase their empathic accuracy in situations that contain high motivational cues for accuracy. For example, would high avoiders show interest (and be more accurate)

when they meet a friendly target, who is interested in getting to know them, rather than a colder target who behaves more formally (Carvallo & Gabriel, 2006)?

To sum up, our study suggests that people with high attachment avoidance are less accurate compared with people with low avoidance in identifying the thoughts and feelings of an interaction partner whom they have just met. We showed that this reduction in sensitivity to the other's thoughts and feelings stems from a failure in perception, over and above the influence perceivers might have on the readability of their targets. Our findings also indicate that the impairment in empathic accuracy could be traced, in part, to the tendency of high avoiders to show less interest in their interaction partners. Thus, it seems that when meeting strangers, the high avoiders' defense strategies create a self-defeating loop: Even if they wish to get closer to the other, they fail to be sensitive to the other's thoughts and feelings, and they distance themselves from the other, acting as if they do not know him or her and as if they would like to keep it that way. Such cognitive and behavioral tendencies reinforce themselves, thereby creating a self-fulfilling prophecy of troubled interpersonal relationships (Collins, Cooper, Albino, & Allard, 2002; Gallo, Smith, & Ruiz, 2003; Horowitz et al., 1993; Mallinckrodt & Wei, 2005).

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