

A photograph of a man in a light blue striped shirt reaching his hands up towards a young child in a yellow and black striped shirt who is jumping or falling in the air. The background is a bright, cloudy sky.

Edited by Ken J. Rotenberg

# **Interpersonal Trust** **During Childhood** **and Adolescence**

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## Interpersonal Trust During Childhood and Adolescence

Since the beginnings of psychology as a discipline, interpersonal trust has been regarded as a crucial aspect of human functioning. Basic levels of interpersonal trust among people were believed to be necessary for the survival of society and the development of successful psychosocial functioning. Some research has shown that interpersonal trust is linked to physical health, cognitive functioning, and social functioning (including close relationships) across development. This book presents the current research in the growing field of interpersonal trust during childhood and adolescence (up to the onset of adulthood). It deals with the extent to which children and adolescents demonstrate the multiple facets of trust and trustworthiness, and how these multiple facets affect their social relationships with a wide range of social contacts: parents, peers, and social groups. It will be of interest to developmental, social, educational, and clinical psychologists.

Ken J. Rotenberg is Professor in the School of Psychology at Keele University. He is the editor of *Disclosure Processes in Children and Adolescents* (Cambridge, 1995) and co-editor of *Loneliness in Childhood and Adolescence* (Cambridge, 1999).



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Edited by Ken J. Rotenberg



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For Mooney Rotenberg





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*Section I*

Conceptual foundations and issues



# 1 Introduction

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*Ken J. Rotenberg (Keele University)*

Scholars throughout the world have advanced the principle that society cannot survive unless individuals establish and sustain basic levels of interpersonal trust (O'Hara, 2004; Uslander, 2002; Volker, 2002; Warren, 1999). Furthermore, interpersonal trust has been regarded as a crucial facet of human functioning since the very beginning of psychology as a discipline (Erikson, 1963; Hartshorne, May, and Maller, 1929). There is a growing body of evidence demonstrating that interpersonal trust across the course of development is linked to: physical health (e.g., Barefoot, Maynard, Beckham, Brammett, Hooker, and Siegler, 1998), cognitive functioning (e.g., Harris, 2007; Imber, 1973), social functioning (e.g., Rotenberg, Boulton, and Fox, 2005; Rotter, 1980), and the development and maintenance of close relationships (e.g., Holmes and Rempie, 1989). Certainly, interpersonal trust plays a crucial role for physical health and psychosocial functioning during childhood and adolescence. Furthermore, because of developmental trajectories, interpersonal trust during childhood and adolescence should affect individuals by adulthood both directly (i.e., early trust affects later trust) and indirectly (i.e., via earlier links to health and psychosocial functioning). Unfortunately, there is a dearth of research on this topic. Indeed, most contemporary psychology books on childhood, adolescence, or developmental psychology *fail* to include *any* reference to interpersonal trust at all.

The purpose of this book is to redress that oversight and establish interpersonal trust during childhood and adolescence as a priority within the discipline of psychology. The book includes a selective set of chapters that address interpersonal trust during onset of adulthood as well as late adolescence. Although these chapters push the age boundary, they help to provide a bridge between the research on interpersonal trust during the conventionally defined periods of childhood and adolescence and the research on interpersonal trust during the conventionally defined period of adulthood.

The goal of the book is threefold: (1) to present the *current* research in the *growing* field of interpersonal trust during childhood and adolescence

(up to the onset of adulthood); (2) to highlight the fact that interpersonal trust during childhood and adolescence is a highly significant phenomenon for researchers from a wide array of nationalities and cultures (e.g., Australia, Canada, Northern Ireland, United Kingdom, United States, and Japan); and (3) to serve as an impetus for further research on this phenomenon. It is truly hoped that this book will encourage the future generation of researchers to examine interpersonal trust during childhood and adolescence. To my knowledge, this is the *first* academic book to comprehensively address that topic: an achievement that is, in my opinion, long overdue. The book should be valuable to a range of individuals, both from within and from outside of the discipline of psychology, such as: social psychologists, developmental psychologists, clinical psychologists, counselling psychologists, counsellors, educational psychologists, educators, health professionals, sociologists, politicians, and legal professionals.

This book is divided into three sections. [Section I](#) is devoted to broad issues confronting researchers, including this overview, the conceptualization of interpersonal trust, neurological factors contributing to interpersonal trust, and evolutionary approaches. The following two sections represent a developmental organization of work on the topic. [Section II](#) is devoted to interpersonal trust during childhood, and [Section III](#) is devoted to interpersonal trust during adolescence and early adulthood.

The following chapters appear in [Section I](#). This introduction comprises [Chapter 1](#). In [Chapter 2](#), I (Ken J. Rotenberg) outline in detail the bases, domains, and targets (BDT) framework of interpersonal trust. The BDT framework represents a unified approach to interpersonal trust during childhood and adolescence (and adulthood) that comprises the complex array of trust and trusting behavior towards the range of persons, groups, and abstract groups in individuals' social worlds. The BDT framework has guided a number of chapters and corresponding research reported in this book. In [Chapter 3](#), Matilda E. Nowakowski, Tracy Vaillancourt, and Louis A. Schmidt present the research on oxytocin and vasopressin acids, which are hormones and neurotransmitters. These researchers outline the role of oxytocin and vasopressin in the nurturance and bonding in nonhuman species (primarily rodents), and the role of oxytocin on adult humans' trust behavior in a game interaction. The implications of the findings for interpersonal trust during childhood and adolescence are discussed.

An evolutionary perspective guided, in part, the research carried out by Atsushi Sakai in [Chapter 4](#). He examined children's sense of trust, which comprised their perceptions of trusting mother, father, sibling, and best friend, and their perceptions of being trusted by each of them.

In the first of two studies, 194 pairs of monozygotic twins (MZ) and 127 pairs of dizygotic twins (DZ) from 9 to 10 years and 11 to 12 years of age were tested. It was found that shared and non-shared environmental factors statistically accounted for the sense of trust in parents, sibling, and best friend. In Study 2, two waves of same-sex MZ and DZ twin pairs ranging from 9 to 13 years of age were tested. The findings showed that the sense of trust in parents buffered the effects of negative peer life events on depression. In particular, children with a low sense of trust in parents showed elevated depression as a function of negative peer life events.

The following chapters appear in [Section II](#). In [Chapter 5](#), Kathleen Corriveau and Paul L. Harris describe a series of studies on young children's reliance on the information provided by others as evidence of their trust. The researchers found that preschool children were generally more inclined to rely on the information from an informant who was familiar than from one who was unfamiliar. Nevertheless, it was found that preschool children's reliance on information was affected by the accuracy of the informant, the reliability of the information, and bystander assents of the informant. Furthermore, those patterns were found to be associated with the children's quality of attachment and theory-of-mind ability. In [Chapter 6](#), Lucy R. Betts, Ken J. Rotenberg, and Mark Trueman report in detail the use of social relation and mutual influence analyses in examining young children's specific trust beliefs, peer-reported trustworthiness, and reciprocity of trust in social groups and best friend dyads. The chapter provides examples of the applications of social relation and mutual influence analyses for researchers in the field.

In [Chapter 7](#), Shirley McGuire, Nancy L. Segal, Patricia Gill, Bridget Whitlow, and June M. Clausen examine sibling trust with data from the Twins, Adoptees, Peers, and Siblings (TAPS) study. The TAPS design contains four sibling dyads that vary in genetic relatedness: monozygotic twins (MZ), dizygotic twins (DZ), full sibling pairs (FS), and virtual twins (VT). The researchers found, for example, that there were appreciable correlations between children's trust beliefs in their mother and children's trust beliefs in their siblings. Furthermore, in support of evolutionary theory, the researchers found that MZ twins reported significantly higher trust beliefs in their sibling compared to DZ twins, full sibling pairs, and virtual twins. In [Chapter 8](#), Kay Bussey examines the issues of interpersonal trust (specifically the role of promises) within the context of child victims of sexual abuse. Kay Bussey points out that child victims of sexual abuse are often caught in a dilemma in which they are required by the abuser to promise to keep the abuse secret, but are required to promise to tell the truth about the abuse in court. In [Chapter 9](#),

Victoria Talwar and Sarah-Jane Renaud examine parents' detection of their children's untrustworthiness using a modified temptation resistance paradigm (i.e., resist peeking at a forbidden toy). It was found that parents were able to predict their child's peeking behavior and their lying about their behavior above a chance level.

The following chapters appear in [Section III](#). In [Chapter 10](#), Nancy Darling and Bonnie Dowdy examined the association between adolescents' reports of their own trustworthiness and mothers' trust beliefs in their adolescents. The data were derived from the Home:School Linkages project and comprised interviews with sixty-seven mother-adolescent dyads. The authors found a very modest association between adolescents' reports of their trustworthy behavior and mothers' trust beliefs. It was found that adolescents reported that they frequently used deception when they disagreed with their parents. In [Chapter 11](#), Judith G. Smetana reports the findings from a series of studies designed to examine adolescents' willingness to disclose to parents about their activities as a function of both the domain of the activity and the quality of the parent-adolescent relationship. It was found in one study, for example, that adolescents' perceptions of trusting relationships with parents was more strongly associated with reported voluntary disclosure of personal issues than either of prudential or peer activities. In another study, it was found that adolescents were more willing to disclose to their parents when they perceived their parents as setting more limits on their behavior.

In [Chapter 12](#), Brandy A. Randall, Ken J. Rotenberg, Casey J. Totenhagen, Monica Rock, and Christina Harmon describe the psychometric properties and the correlates of a new scale for assessing adolescents' trust beliefs. In [Chapter 13](#), Gustavo Carlo, Brandy A. Randall, Ken J. Rotenberg, and Brian E. Armenta found that the relation between undergraduates' interpersonal trust beliefs and their prosocial behavior varied as a function of the type of prosocial activity. It was found that trust beliefs (emotional trust beliefs in mothers, honest trust beliefs in fathers and romantic partners) were negatively associated with *public prosocial behaviors*, but positively associated with *altruism*. In [Chapter 14](#), Rhiannon N. Turner, Miles Hewstone, Hermann Swart, Tania Tam, Elissa Myers, and Nicole Tausch describe a series of studies on "intergroup trust," which comprises a positive expectation about the intentions and behavior, and thus trust, of an outgroup towards the ingroup. The findings yielded support for the hypothesis that having outgroup friendships promotes outgroup impersonal trust by adolescents and young adults from a range of cultures/races: Protestants and Catholics in Northern Ireland, White and Colored individuals in South Africa, and South Asian and White individuals in the UK.

In summary, this book provides a comprehensive review of the theory and research on interpersonal trust during childhood and adolescence. The work presented is by scholars from a range of countries. The book should be of value to individuals from a wide range of disciplines and serve as impetus for the investigation of interpersonal trust during childhood and adolescence in the years to come.

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## 2 The conceptualization of interpersonal trust: A basis, domain, and target framework

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*Ken J. Rotenberg (Keele University)*

The notion that trust is crucial to psychosocial functioning has been advanced since the beginning of contemporary psychology (see Simpson, 2007). Erikson (1963) proposed that trust is formed during infancy and affects psychosocial functioning during the life-course. Similarly, attachment theorists propose that infants' trust is a product of their interactions with caregivers that, via its role in a cognitive model (the internal working model [IWM]), affects subsequent social functioning (Armsden and Greenberg, 1987; Bridges, 2003; Waters, Vaughn, Posada, and Kondo-Ikemura, 1995). Researchers have emphasized the role that trust plays in relationships with parents and peers across childhood and adolescence (see Bernath and Feshbach, 1995; Harris, 2007). Also, trust has been regarded as a critical facet of romantic relationships during adulthood (e.g., Holmes and Rempel, 1989; Mikulincer, 1998; Miller and Rempel, 2004).

A major problem confronting a researcher is how to conceptualize and assess interpersonal trust. This type of problem is frequently encountered in the discipline of psychology, where researchers examine constructs that correspond to commonly understood terms or concepts: ones that tap into individuals' naïve notions of psychosocial functioning. As a consequence, the conceptualization of trust is a very thorny problem, because a researcher's conceptualization may not match those commonly held by a social community, thus appearing to be disconnected from social reality. Researchers might attempt to avoid such problems by assessing individuals' perceptions or reports of trust per se. Unfortunately, this method is very limited because the meaning of the measure is unclear. Specifically, individuals likely hold somewhat different notions of trust, and consequently such judgments may not serve as a meaningful measure of a given construct (i.e., exactly what are individuals judging?). Furthermore, the definition of such a construct is essentially teleological: "trust is what individuals perceive it to be." Finally, individuals' perceptions of trust likely tap into their naïve notions of psychosocial functioning and therefore may be associated with other measures by *implicit association*.



One potential resolution of this “struggle” is to conceptualize trust in a fashion that is compatible with the concept of it held by the social community – thus maintaining its social meaningfulness – but that can be operationalized and measured by an array of precepts and behaviors. Moreover, such a conceptualization should be optimally compatible with other lines of research on the topic. One such resolution is Rotenberg and his colleagues’ 3 (bases)  $\times$  3 (domains)  $\times$  2 (target dimensions) interpersonal trust framework – the BDT (Rotenberg, 1994, 2001; Rotenberg, Boulton, and Fox, 2005; Rotenberg, Fox, Green, Ruderman, Slater, Stevens, and Carlo, 2005; Rotenberg, MacDonald, and King, 2004; Rotenberg, McDougall, Boulton, Vaillancourt, Fox, and Hymel, 2004). The purpose of this chapter is to: (1) clarify the BDT framework; (2) describe how BDT is similar to, and differs from, other relevant theories and related research; (3) discuss the extent to which the research supports its utility; and (4) discuss the implications of the BDT framework as an impetus for future research. The chapter will include a description of some of the limitations of the BDT framework.

The BDT interpersonal trust framework is shown in Figure 2.1. The framework includes the following three bases of trust: (1) reliability, which refers to a person fulfilling his or her word and promise; (2) emotional trust, which refers to a person refraining from causing emotional harm, such as being receptive to disclosures, maintaining confidentiality of them, refraining from criticism, and avoiding acts that elicit embarrassment; and

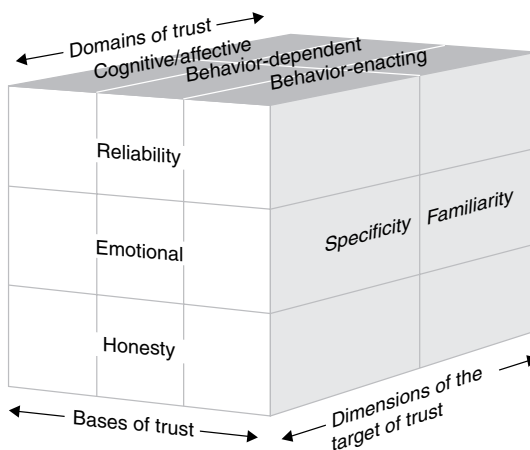


Figure 2.1 The bases  $\times$  domains  $\times$  target dimensions interpersonal trust framework

(3) honesty, which refers to a person telling the truth and engaging in behaviors that are guided by benign rather than malicious intent, and by genuine rather than manipulative strategies. The three domains are: (1) cognitive/affective, which comprises individuals' beliefs and feelings that others demonstrate the three bases of trust; (2) behavior-dependent, which comprises individuals behaviorally relying on others to act in a trusting fashion as per the three bases of trust; and (3) behavior-enacting (trustworthiness), which comprises individuals behaviorally engaging in the three bases of trust.

Finally, the framework includes the components of the specificity dimension of the target of trust (ranging from general category versus a specific person) and familiarity of the target of trust (ranging from slightly familiar to highly familiar). The framework highlights reciprocal qualities of trust whereby a person's trust in his or her partner within a dyad tends to be matched by the partner.

### **Relation of the BDT to other lines of research on trust**

The three bases of trust as beliefs have been examined in some forms within various lines of investigation: reliability beliefs by adults (e.g., Rotter, 1980) and by children (Hochreich, 1973; Imber, 1973), emotional trust beliefs by adults (Johnson-George and Swap, 1982), and honesty beliefs by adults (Giffin, 1967). Similarly, the three bases of trust as behavior-dependency have been examined as: (1) reliability trust in the form of relying on promises in the Prisoner's Dilemma game by adults (Schlenker, Helm, and Tedeschi, 1973) and by delay of gratification by children (Lawton, 1966); (2) emotional in the form of the willingness to disclose personal information by adults (Steel, 1991); and (3) honesty in the form of relying on the accuracy of information by children (Harris, 2007). Finally, the three bases of trust as behavior-enactment have been examined as: (1) reliability behavior by adults fulfilling their promises (Simons, 2002); (2) emotional behavior by children keeping secrets (Carlson, 2007) and adults keeping secrets; and (3) honesty behavior by children in the form of truthful communication (Wilson and Carroll, 1991).

The specificity and familiarity dimensions of the target of trust encompass the partner, network, and generalized levels of trust described by Couch and Jones (1997), and the distinction between general and specific trust beliefs made by Johnson-George and Swap (1982). The reciprocal/dyadic nature of trust has been examined by a range of researchers, notably for romantic relationships by adults (Bartle, 1996; Holmes, 1991; Holmes

and Rempel, 1989; Larzelere and Huston, 1980; Wieselquist, Rusbult, Foster, and Agnew, 1999). The BDT framework includes individuals' perceptions or attributions of trust per se as a measure of the cognitive/affective basis of trust, but the framework fosters a multi-measure assessment of interpersonal trust.

### **The BDT framework and perceived risk**

The BDT framework bears on other facets of interpersonal trust. Giffin (1967) defined trust as "reliance upon the communication of another person in order to achieve a desired but uncertain objective in a *risky situation*" (p. 105, italics mine). Dunn and Schweitzer (2005) define trust as "the willingness to accept vulnerability based upon *positive expectations* about another's behavior" (p. 736, italics mine). The perception of risk and positive expectations play significant roles in the BDT framework. Consider, for example, the possibility that a target person's behavior is fixed as reliable, emotionally trustworthy, and honest because of some *apparent* external conditions (e.g., threat, enforced legal obligation). In that situation, an individual's trust beliefs about the target person, behavior-dependent trust towards him or her, and behavior-enacting trust towards him or her would be *irrelevant*. An individual's cognitive-affective behavior orientation to others, as outlined by the BDT framework, is *activated* when the individual perceives or apprehends risk and uncertainty of the situation for him or her: the greater the risk/uncertainty, the greater the activation. The cognitive-affective behavior orientation is designed to reduce risk and uncertainty, as well as to establish positive outcomes from social interaction.

Regarding the aforementioned definitions, researchers have found that trustworthiness comprising honesty, dependability, and loyalty is the most constantly desirable attribute in others (Cottrel, Neuberg, and Li, 2007). Ascribing those attributes to persons presumably gives rise to positive expectations about their behavior. Nevertheless, other attributes are ascribed to persons (e.g., cooperativeness, agreeableness, emotional stability) (see Cottrel, Neuberg, and Li, 2007) that presumably give rise to positive expectations about their behavior. The BDT framework posits that trust includes a *defined set* of beliefs (expectations) about persons – reliability, emotional, and honesty – which comprises (at the trusting end of the continuum) positive expectations of their behavior. This entire issue can be highlighted with reference to attachment theory. According to the BDT framework, trust by children and adolescents as beliefs is *distinct* from other forms of expectations, such that others are affectionate, loving, protective, supportive, kind, cooperative – attributes that may

contribute to attachment and the IWM. How these distinctions are made during early development warrants consideration.

In summary, the BDT approach highlights that the three domains of trust (trust beliefs, behavior-dependent, and behavior-engaging) serve as potentials which become activated as a function of perceived or apprehended risk or uncertainty of a social situation. Furthermore, the domains serve to reduce risk and uncertainty, and increase the likelihood of positive outcomes of social interaction.

These principles may be best clarified by an example. Consider a child who holds high versus low beliefs that his or her parents are reliable, emotionally trustworthy, and honest. The child is walking down a street in their neighborhood with his or her parent, when suddenly a large dog approaches the child and starts barking. The parent instructs the child to try to be relaxed, not to pet the dog, and not to run away (likely wise advice); the child agrees to do so. Because this child holds high trust beliefs in his or her parent, the child would likely show trust-dependent behavior by relying on the parent's word to remain calm, and engage in trust-enacting behavior by not petting the dog and not running away – as promised by the child. In this example, the child displayed a given sequence of cognitive-affective behavior reactions in response to a risky and threatening situation, predicated, in part, on pre-existing trust beliefs in his or her parent. A very different sequence of reactions would have been demonstrated by a child who held low trust beliefs in his or her parent. It may not be possible to distinguish between this child and the child who held high trust beliefs in his or her parent while walking down the street, but differences would emerge when the large dog approached. Although the parent may give the same advice, this child would not be comforted by his or her parent's communication, would show anxiety, and might attempt to pet the dog or run away (likely the latter) – despite the child likely agreeing with the parent's recommended behavior. It should be emphasized that in both cases (i.e., high or low trust beliefs), the children's trust beliefs and corresponding behavior serve to result in positive outcomes from the interaction, such as avoiding being harmed by the dog.

In the aforementioned example, it is apparent how reciprocity and dyadic patterns emerge in parent-child interactions. When confronted by another risky or threatening situation, the child with high trust beliefs might hold even higher trust beliefs than before, be more likely to behaviorally rely on the parent, and show behavior-enacting trust. Importantly, as a result of such events, the parent would hold high trust beliefs in the child, depend on the child to rely on his or her (the parent's) word (as behavior-dependent trust), and rely on the child to show behavior-enacting trust in the form

of demonstrating the recommended behaviors. The *opposite* pattern would emerge for the parent of the child who held low trust beliefs: the parent would hold low trust beliefs and expectations of behavior dependent and behavior enactment towards the child. The cognitive-affective behavior orientation of each partner is dyadic and therefore converges during the course of social interactions. According to the framework, this comprises the development of *social histories*.

In the aforementioned example, the parent's own behavior-enacting trust (i.e., trustworthiness) plays a crucial role in the preceding interactions. If the parent was not conveying the truth about how to deal with a potentially aggressive dog, perhaps as an act of deception, the entire sequence of the high trusting child's cognitive-behavior reactions would likely change. After being harmed or truly frightened by the dog, the child's trust beliefs, behavior-dependent trust, and behavior-enacting trust would suffer: he or she would not believe in the parent's word, be reluctant to depend on it, and be unlikely to fulfill his or her own promises to the parent. In effect, the child would have felt betrayed. What is important to note here is that these patterns should hold if the other person in the interaction was someone else: an older sibling, a relative, a peer, a teacher, a neighbor, a policeman, a crossing guard, or even a stranger (although the affect reactions contributing betrayal would certainly vary as a function of the nature of the relationship with the person). These events serve to establish social histories of interpersonal trust between the children and others.

### **The significance of interpersonal trust for children and adolescents**

The BDT framework provides a perspective on why interpersonal trust is critical for children and adolescents – as has been advanced by various authors (e.g., Bernath and Feshbach, 1995; Erikson, 1963). Again, an example may clarify this point. Imagine that a child believes that the persons in his or her social world (parents, teachers, peers, siblings, and doctors) do not fulfill their promises or keep their word, do not keep information confidential, are critical to disclosure, are not honest in their communication, but are deceptive and manipulative. The child would withdraw from social contact and fail to attain or achieve, for example, social skills, social support, peer group relationships, close relationships, academic achievement, and medical treatment for illnesses.

Consistent with the aforementioned conclusion, it has been found that children's trust beliefs are positively associated with: low depression (Lester and Gatto, 1990), delay of gratification (Hochreich, 1973),

helping others (Rotenberg, Fox, Green, Ruderman, Slater, Stevens, and Carlo, 2005; also see [Chapter 13](#) of this book), social status (Buzzelli, 1988), low loneliness (Rotenberg, MacDonald, and King, 2004), academic achievement (Imber, 1973), absence of emotional disorders (Meltzer, Vostanis, Goodman, and Ford, 2007), and adherence to prescribed medical regimes (Rotenberg, Cunningham, Hayton, Hutson, Jones, Marks, Woods, and Betts, 2008; for a review see Bernath and Feshbach, 1995). As will be discussed, this conclusion warrants qualification.

### **Distinction between attachment theory and the BDT framework**

According to attachment theory, the internal working model includes trust within the parent–child relationship and serves as a prototype of relationships; the latter, in turn, affects the formation of subsequent social relationships (see Bowlby, 1969, 1973, 1980). The BDT framework is distinct from attachment theory because it: (1) highlights the establishment of unique levels of trust towards various targets – who are not necessarily caregivers – varying in familiarity and generality; (2) treats trust as a multifactor phenomenon comprising different bases, rather than as a single factor implied by IWM; (3) emphasizes that trust in given targets emerges from social histories comprising reciprocal interactions among beliefs, behavior-dependent, and behavior-enacting; and (4) emphasizes that trust is a phenomenon that is separate from other relationship measures (e.g., love or affection, satisfaction, proximity-seeking), and its antecedents, correlates, and consequences can be uniquely examined. The BDT does accommodate some effects of early attachment bonds via IWM on individuals' trust in other targets. Nevertheless, the BDT does not represent a stance regarding the strength or time-dependent nature of such effects. In general, the BDT framework represents a unified approach to trust during childhood and adolescence (as well as adulthood) that comprises the array of trust and trusting behavior towards the range of persons, groups, and abstract groups in the individual's social world.

### **Direct empirical support for the utility of the BDT**

The BDT has provided the basis for the development of six psychometrically established scales designed to assess the cognitive/affective domain – trust beliefs. The scales are (1) the Early Childhood Trust Belief Scale (Betts, Rotenberg, and Trueman, 2009a); (2) the Children's Interpersonal Trust Belief Scale (Rotenberg, Fox, Green, Ruderman,

Slater, Stevens, and Carlo, 2005); (3) the Children's Trust in General Physicians Scale (Rotenberg, Cunningham, Hayton, Hutson, Jones, Marks, Woods, and Betts, 2008); (4) the Children's Trust-Value Basis of Friendship Scale (Rotenberg and Morgan, 1995); (5) the Adolescents' Interpersonal Trust Belief Scale for adolescents and adults (Chapter 12 of this book); and (6) A Trust in Legal Professionals Scale for adults (Rotenberg, Emerson, Faulkner-Dunn, Gawn, Goswell, Ghumra, Shaikh, and Litvak, under review). All of these scales assess the three bases of trust beliefs. The targets of the scales are modestly familiar and general targets that include general categories of: mothers, fathers, teachers, peers, peer friends, physicians, and legal professionals.

The BDT framework has also provided the basis for assessing children's trust beliefs in more specific individuals or social groups: peer group (Rotenberg, 1986; Rotenberg, Boulton, and Fox, 2005; Rotenberg, MacDonald, and King, 2004), peer friend (Rotenberg, Boulton, and Fox, 2005; Rotenberg, MacDonald, and King, 2004), and siblings (see Chapter 6 of this book). In the research, children judge the extent to which peers, peer friends, or siblings keep promises (i.e., reliability trust beliefs) and keep secrets (i.e., emotional trust beliefs). In one study, Rotenberg (1986) found that children showed greater trust beliefs in same-sex than in opposite-sex peers, and that pattern emerged over the course of the early elementary school years. As another application, Rotenberg and Cerda (1994) examined 9- to 11-year-old Native and non-Native children's reliability, emotional, and honesty trust beliefs in different- as opposed to same-race hypothetical peers (i.e., either Native or non-Native). It was found that the children showed greater trust beliefs in same-race than different-race hypothetical peers, but that difference was attenuated when the children were enrolled in mixed-race schools. Finally, the BDT has guided the assessment of children's trustworthiness by peers and teachers judging the extent to which children kept promises and kept secrets (Betts and Rotenberg, 2007, 2008; Rotenberg, McDougall, Boulton, Vaillancourt, Fox, and Hymel, 2004; Rotenberg, Michalik, Eisenberg, and Betts, 2008).

As an examination of the domains of the BDT framework, Betts and Rotenberg (2008) carried out a social relations analysis of 5- to 7-year-old children's reports of promise-keeping and secret-keeping of peers. The study yielded significant "actor effects," demonstrating that there were significant individual differences in children's trust beliefs in peers. It also yielded significant "partner effects," demonstrating that there were significant individual differences in children's behavior-enacting trust as reported by peers. Finally, the study yielded evidence for dyadic reciprocity, which was more clearly shown among girls than among

boys. The analyses provided evidence for the cognitive/affective domain, behavior-enacting domain, and dyadic quality of trust, respectively, as outlined by the BDT framework.

### **Behavior-enacting trust (trustworthiness): A BDT view of early findings**

As noted, interpersonal trust has been a focus of interest since the beginning of contemporary psychology. In that vein, Hartshorne and his colleagues (Hartshorne and May, 1928; Hartshorne, May, and Maller, 1929; Hartshorne, May, and Shuttlesworth, 1930) reported finding that children did not demonstrate coherent honesty traits. These researchers found, for example, low correlations (average .23) among thirty-three different tests of three types of deceit: cheating, lying, and stealing. It is worthwhile to note, though, that the researchers found stronger correlations among the tests of deceit in similar situations (e.g., in tests of cheating in the schoolroom). The BDT framework implies that there should be *modest* coherence or consistency of trustworthiness across a range of behaviors, as was found. In particular, though, the BDT framework leads to the expectation that there should be greater consistency within each basis of trustworthiness as opposed to across bases, and when shown towards a common as opposed to a different target. The finding that there were elevated levels of consistency among measures of deceit in the classroom is compatible with the expectations from the BDT framework that consistency in trustworthiness would be shown when the same basis of behavior is shown towards the same target – in this case, teachers or the category of school. The children who deceived in this case may have established a given history of social interaction with teachers and schools.

A number of researchers have focused on lying as part of a broader range of conduct disorders (see Waldman, Singh, and Lahey, 2006). Guided by the BDT framework, Betts and Rotenberg (2007) found that trustworthiness as assessed by peer reports of promise-keeping and secret-keeping longitudinally predicted school adjustment in 5- to 7-year-old children. Also, Rotenberg, Michalik, Eisenberg, and Betts (2008) found that trustworthiness (similarly assessed) was associated with school adjustment in 4- to 6-year-old children, and that trustworthiness served as a mediator, in part, of the relation between inhibitory control and school adjustment. The latter findings yielded support for the conclusion that inhibitory control is required for children to keep promises and keep secrets, and that this link partially accounts for how inhibitory control contributes to children's adjustment to school (also see Carlson, 2007). Finally, Betts,



Rotenberg, and Trueman (2009b) found that discrepancy between young children's self-perceptions of trustworthiness and reports of trustworthiness by peers/teachers was associated with poor school adjustment in the children. The findings supported the realistic principle prescribing that better psychological adjustment results from congruence between self-perceptions and reality – as marked by peer and teacher reports.

### **Are there consequences of children or adolescents being too trusting?**

There is some evidence that being too trusting has negative consequences for children. Rotenberg, Boulton, and Fox (2005) carried out a short-term (8-month) longitudinal study with children initially of 9 years of age. The researchers proposed that children with very low trust beliefs and those with very high beliefs violated peer norms of trust (e.g., cynical or naïve, respectively) and that would result in peer rejection. In support of that hypothesis, the researchers found that children with very low trust beliefs and those with very high trust beliefs in peers (or in peer friends) had lower self-perceived social acceptance, and were more excluded by peers and less preferred than were children with the middle range of trust beliefs. Furthermore, the researchers found some evidence that those forms of peer rejection resulted in increases in internalized maladjustment. There was a negative linear longitudinal relation between children's trust beliefs in peers and internalized maladjustment (loneliness, depressive symptoms, and anxiety): the lower the children's trust beliefs, the more they demonstrated increases in internalized maladjustment. The observed linear relation was qualified, however, by a quadratic curvilinear pattern: children with very low trust beliefs and those with very high trust beliefs show greater increases in internalized maladjustment than that expected by a linear relation. The observed pattern was asymmetric, with children with very high trust beliefs being less disadvantaged than children with very low trust beliefs. The findings supported the conclusion that the peer rejection of children with high trust beliefs resulted in some elevation of their psychological maladjustment.

### **The role of discrepancy among the bases, domains, and targets of trust**

The BDT framework posits that the bases, domains, and targets are all related facets of trust and thus are modestly associated – often as a sequence (e.g., trust beliefs promote behavior-dependent trust). Nevertheless, one of the defining features of the framework is its distinction among the

bases, domains, and targets: this offers the opportunity of examining the discrepancy or conflicts among all components of the framework. As one example, Rotenberg, Fox, and Boulton (2009) examined the discrepancy between trust beliefs and their behavior-enacting trust (as reported by peers) in 9- to 11-year-old children. It was found that the more the children demonstrated trust beliefs that exceeded their behavior-enacting trust, the more they showed low levels of peer preference, high levels of peer victimization, and high levels of social disengagement. Furthermore, discrepancy between trust beliefs and behavior-enacting trust was predictive of increases in loneliness in girls, which was partially mediated by peer victimization. The findings supported the conclusion that the discrepancy between trust beliefs in peers and behavior-enacting trust in children was cross-sectionally and longitudinally associated with low psychosocial functioning.

The issue of discrepancy or conflict in the bases, domains, and targets of trust is exemplified in [Chapter 8](#) of this book, by Kay Bussey, on the victims of sexual abuse. The chapter describes the dilemma in which a child is asked to reveal sexual abuse to legal professionals, but has promised the perpetrator of the sexual abuse – a parent or guardian – not to reveal those activities to others. This dilemma represents the conflict between reliability behavior-dependent trust towards modestly familiars (i.e., legal professionals) and emotional behavior-enacting trust towards a very familiar and specific target (i.e., the father). Such conflicts may be prevalent in human interaction. For example, a leader of a country may be involved in a conflict between telling the truth to his or her public (i.e., behavior-enacting honesty trust to unfamiliar and general others) and maintaining confidentiality of information to his or her advisors (i.e., behavior-enacted emotional trust to a very familiar and specific target). The complex issues surrounding trust in politicians within the United Kingdom has been discussed by O'Hara (2004).

### **Affect, emotional states, and interpersonal trust**

Various researchers have discussed the emotional or affective components of interpersonal trust. For example, Lewis and Weigert (1985) distinguished between cognitive, emotional, and behavioral dimensions of trust. The cognitive dimension entailed a rational knowledge structure that included a leap of inference that permitted the identification of trustworthiness in the social world. The emotional trust dimension comprised the emotional bond established in relationships that was shown by an individual as emotional outrage when betrayed. Behavioral trust consisted of an individual undertaking a risky course of action that reflected

confidence in others to act competently and dutifully. These distinctions bear a resemblance to the domains outlined in the BDT framework. According to Lewis and Weigert (1985), "Trust in everyday life is a mix of feeling and rational thinking" (p. 972).

Guided by a different theoretical orientation, Dunn and Schweitzer (2005) investigated the influence of emotional states on the judgments of trust. These researchers found that the induction of positive emotional states (e.g., gratitude, pride, happiness) increased trust in an unfamiliar person, and that the induction of negative emotional states (e.g., anger, sadness) decreased trust in that person. It was further found that the effects of the emotional states on trust were stronger when they were characterized by other-person control (e.g., anger and gratitude) and weak control appraisal (e.g., happiness) than when they were characterized by personal control (pride) or situation control (e.g., sadness). The emotional states were not found to appreciably affect trust judgments in a familiar person.

The BDT framework was based on the premise that trust beliefs include a substrate of affect that was primarily reflected in the *intensity or strength* of conviction (e.g., gut feelings) that others showed reliability, emotional trustworthiness, and honesty. Although this affective component was originally conceptualized as complementing trust beliefs, there is some possibility that they may not correspond precisely. For example, some individuals have reported the experience that they have a *feeling* they cannot trust a given person, but they are unable to articulate why. These experiences may reflect a gap between the cognitive representation of others (i.e., beliefs) and affective reactions to them, perhaps because of limits to the conceptualization of persons or events, or social desirability effects on cognitive representations of trust beliefs.

Because trust beliefs are affect-laden expectations of others' behavior, according to the BDT framework, violations of those expectations would be expected to evoke intense emotional reactions. Moreover, those are embedded in the closest bonds in human relationships (i.e., attachment, romantic) and therefore are linked to strong emotional reactions. Researchers have examined the emotional states associated with trust confirmation and trust violations in adult romantic relationships. For example, Mikulincer (1998) examined in a series of studies the differences between undergraduates varying in romantic attachment types: secure romantic attachment style, avoidant, and anxious-ambivalent.

In Study 1, Mikulincer (1998) assessed undergraduates' reaction time for recalling episodes regarding the behavior of father or mother or romantic partner which were positive (i.e., in a way that he or she increased the trust you felt towards him or her) or negative (in a way that