Section I

Conceptual foundations and issues

1 Introduction

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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 Remple, 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

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(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,

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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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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*.

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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) × 3 (domains) × 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
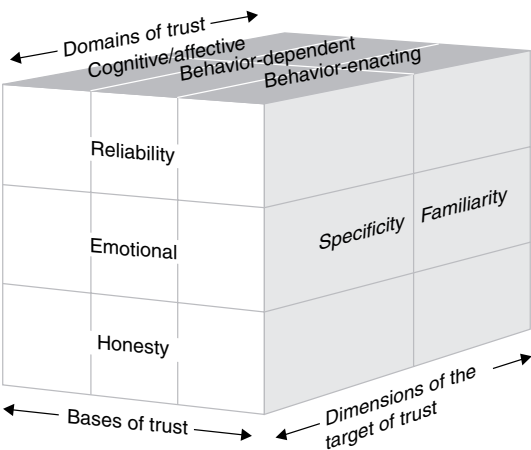

Figure 2.1 The bases × domains × target dimensions interpersonal trust framework

(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 Remple, 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