

Getting to know you: A longitudinal examination of trust cues and trust development during socialization

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ABSTRACT

Despite recent theoretical advances, the pattern of trust development between coworkers has yet to receive focused longitudinal attention. Furthermore, current theory suggests that employees attend to an array of independent trust cues in any given situation but fails to identify which cues are important when. In a four wave longitudinal field study we demonstrate how new coworker intentions to engage in trust behaviors (reliance and disclosure) evolve during employee socialization, and examine the trust cues that prime decisions to trust. We present a latent growth model of trust development which reveals, for the first time, that reliance and disclosure intentions in early work relationships develop in a positive, nonlinear pattern over time. Furthermore, the study indicates that propensity to trust has a statistically significant effect on the initial status of intention to rely on and disclose information with coworkers but not on changes in trust behavior over time. The multi wave design permits comprehensive assessment of the change in impact of different trust cues over time and demonstrates that the importance of certain cues varies depending primarily on the type of trust in question, and potentially changes as a relationship matures. We discuss the theoretical implications and directions for future research.

Keywords: Trust Development, Trust Cues, Socialization, Newcomers, Longitudinal Data

**GETTING TO KNOW YOU: A LONGITUDINAL EXAMINATION OF TRUST CUES
AND TRUST DEVELOPMENT DURING SOCIALIZATION**

INTRODUCTION

Trust is vital for the effective functioning of working relationships. When trust is present, individuals and groups can cooperate freely without the need to monitor others or engage in self protective behaviors (Mayer & Gavin, 2005). As such, trust has been widely accepted as an important predictor of employee attitudes and behaviors including job performance and extra role behavior (Colquitt, Scott, & LePine, 2007; Dirks & Ferrin, 2002) with outcomes at an individual, group and organizational level (Fulmer & Gelfand, 2012). While research interest in the trust area has increased in recent years, many basic trust processes remain unclear (Li, 2007) and the trust literature has been criticized for being “long on theory and short on empirical research” (Tomlinson, Dineen, & Lewicki, 2004: 166). This is particularly true in the case of trust development. There are at least three critical gaps in our understanding of trust development processes: a theoretical and empirical fuzziness surrounding the basis of trust decisions, a dearth of longitudinal empirical research to illuminate trust changes over time, and a lack of context specific insight into trust development in organizations.

The first critical gap in the trust development research is a lack of specificity in our understanding of which bases of trust decisions are important in particular situations. Trust theory identifies a broad array of antecedents of trust including trustee attributes (e.g. trustworthiness; Mayer, Davis, & Schoorman, 1995), individual differences and trustor attributes (e.g. trust propensity; Mayer et al., 1995) trustee behaviors such as fairness (Frazier, Johnson, Gavin, Gooty, & Snow, 2010) and leadership styles (Jung & Avolio, 2000), trustor perceptions of organizational policies or procedures (McKnight, Cummings, & Chervany, 1998) and social

characteristics such as group membership (Williams, 2001). However, recent discussion among scholars in the area has highlighted the impracticality of trustees weighing all information equally for every trust decision (Bijlsma & Koopman, 2003; Dietz & Den Hartog, 2006), and the importance of improving our knowledge of which evidence shapes individual decisions to engage in trusting behavior, and when (Dietz, 2011). This research draws on current theoretical understanding of the trust cues which are important in early relationships (McKnight et al., 1998; Meyerson, Weick, & Kramer, 1996) and examines the potential shift from a presumptive to personal basis for trust (Kramer & Lewicki, 2010). Beyond theory, understanding the importance of different trust cues attended to in nascent relationships has important practical implications for personal presentation strategies and tactics. With improved understanding these cues can be effectively managed in a range of organizational settings such as recruitment and selection, employee orientation and newcomer mentoring.

Secondly, although considerable theoretical work has been devoted to illustrating the process of trust development (e.g. Kramer & Lewicki, 2010; Lewicki, Tomlinson, & Gillespie, 2006; Lewicki & Bunker, 1996), the body of empirical work demonstrating this longitudinal process remains small. The term development suggests a dynamic process; indeed the majority of trust development theories explicitly include a role for time or a history of interactions in their models. However, a significant lack of truly longitudinal research has resulted in many unanswered questions and made it impossible to fully test existing theoretical models or to develop a more nuanced understanding of changes in trust over time. This study represents an important step in improving our understanding of trust development as it combines a four wave longitudinal design with an analysis strategy that allows us to model true changes in trust over time. To our knowledge, this is the first such study in the organizational trust development

literature. Longitudinal field research has an additional benefit of providing increased insight for furthering theory development as well as scope for providing prescriptive advice for practitioners (Ployhart & Ward, 2011).

The third gap in our current understanding of trust relates to the context in which trust development is studied. Improving our understanding of context is vital to moving the field of organizational behavior forward (Rousseau & Fried, 2001). In professional organizations where collaborative work amongst colleagues is the key process for generating output, understanding how effective coworker relationships are built is vital. Research attention has been focused primarily on vertical trust relationships such as trust in the organization or supervisor, leading to calls for more empirical work focused on horizontal trust dynamics (Yakovleva, Reilly, & Werko, 2010). Our research focuses on trust at a peer level using socialization groups of up to thirty fellow newcomers as the trust referent. Together these newcomers are engaged in an institutionalized socialization experience over their first three months within their new firm (Van Maanen & Schein, 1979; Jones, 1986). Coworker trust is critical to the everyday functioning of an organization as it allows employees to act under the assumptions that their peers will support them and that they can have confidence in the words and actions of their colleagues (Ferres, Connell, & Travaglione, 2004). Furthermore, we are aware from existing trust theory that trust development is likely to be situation and context specific. The study of trust across different work contexts provides support for the proposition that the antecedents of trust may differ across contexts (Colquitt, LePine, Zapata, & Wild, 2011). Specifically, integrity appears to be the primary driver of trust decisions in high risk contexts while individuals draw on a wider range of available cues when making decisions regarding typical work tasks (Colquitt et al., 2011). Similarly, Jarvenpaa and colleagues suggest that trust development in virtual work relationships

is unlikely to reach the same level as trust in work relationships that involve face to face interaction (Jarvenpaa, Shaw, & Staples, 2004). For trust models to be of practical use a more fine grained understanding of trust over time and across contexts is required. Accordingly, studying trust development in the context of key organizational events or transitions is central to advancing our understanding of this dynamic process. This research examines trust during organizational socialization, a period of time in an individual's working life that is uniquely suited to the study of trust development as it is possible to track trust levels from relationship initiation to a stage of relative relationship maturity. Understanding trust development patterns in early trust relationships has potential applications across a range of analogous contexts including building trust with new customers, clients or collaborators.

Drawing on theory from the field of newcomer socialization and current understanding of early trust processes, our aim is to provide a more nuanced understanding of trust development and to contribute a clear model of change patterns in new workplace relationships to guide future theoretical developments and empirical research. Guided by this purpose, we seek to empirically address three questions which are central to clarifying and advancing our understanding of changes in trust throughout the period of newcomer socialization. Specifically, what are the change patterns of trust as a working relationship matures? How do individual differences in trust propensity impact the development of trust? Finally, do different trust cues influence trusting decisions at different points in a maturing relationship? Our study clearly distinguishes intentions to engage in trust behavior from its antecedents and, for the first time, provides empirical insight into the impact of an array of common trust cues over time. We believe our in depth examination of trust development also provides a practical contribution to organizations which aim to develop effective working relationships amongst newcomers during socialization.

For example, by understanding the pattern of trust development during socialization, organizations can focus their efforts on encouraging peer trust relations during periods where change is most likely to occur.

Trust and Trust Development

Currently the most widely accepted definition of trust is that of Rousseau, Sitkin, Burt and Camerer (1998: 395) in which trust is described as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another.” This definition combines two important perspectives which have been the bases of previous conceptualizations of trust, a willingness to be vulnerable (e.g. Mayer et al., 1995) and positive expectations of others (e.g. Lewicki & Bunker, 1996). In recent years, organizational scholars have increasingly focused their attention on trust as an intention to behave consisting of two dimensions: reliance on others and disclosure of information to others (Gillespie, 2003). In contrast to a traditional behavioral view of trust as a cooperative action (e.g. Deutsch, 1958), Gillespie’s model defines trust as an *intention* to engage in behavior which increases vulnerability. In comparison to previous distinctions between trust and trust behavior (e.g. Mayer et al., 1995), Gillespie’s (2003) conceptualization is closer to trust as it represents a willingness to take a risk rather than actual risk taking behavior. The inclusion of more than one dimension builds on previous theoretical work that emphasizes the contextual nature of trust (e.g. Hardin, 1996) and allows researchers to distinguish between two trust behaviors which are common to workplace relationships. The conceptualization of trust as reliance and disclosure intentions has received considerable support in the literature (e.g. Dietz & Den Hartog, 2006; McEvily & Tortoriello, 2011) and offers a means of determining what an individual might trust another party to do, and to what extent. Gillespie’s (2003) conceptualization of an intention to engage in trust

behavior builds on the Rousseau et al. (1998) definition of trust as a psychological state and provides a method of operationally separating trust from its antecedents. The relatively new operationalization of trust as reliance and disclosure increases the need for research to examine how trust intentions develop and how they are related to other common trust variables.

Newcomer Trust Development

Socialization is the process through which individuals adapt to a new role or job in an organization (Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994). When individuals join a new organization, they strive to reduce feelings of uncertainty by familiarizing themselves with their new task and social environment (Simosi, 2010). Existing research illustrates that the initial socialization of newcomers lasts approximately two to three months (Chen, 2005) during which time employees adapt to their new positions, are integrated into the organization and build relationships with their colleagues (Chan & Schmitt, 2000). The importance of developing effective working relationships with colleagues has been a key theme in socialization research and organizational theorists are increasingly recognizing the importance of newcomer perceptions of relationships at work as a key mechanism for socialization success (Allen & Rhoades Shanock, 2013). The psychological contract literature has also highlighted the importance of this period of socialization in informing new recruits' perceptions of what they can expect from their organization and their colleagues (de Vos, Buyens, & Schalk, 2003). From the moment that they join an organization, new hires must interact and cooperate with their new peers and other organizational members. Before these interactions can take place, it is necessary for individuals to make a judgment regarding their willingness to be vulnerable to their colleagues.

Li's (2012) outline of the contexts in which trust is most critical describes situations in which uncertainty and vulnerability are high, where unmet expectations represent a significant risk and where a level of interdependence is expected. Socialization represents a period of an employee's working life that is likely to incorporate all of these characteristics. In socialization programs where large groups of newcomers join an organization together, levels of social uncertainty and risk may be exacerbated by the general lack of work and organizational experience in the group and the pressure to stand out from the crowd and make a positive impression. Uncertainty reduction theory (Berger & Calabrese, 1975) suggests that this will motivate individuals to form positive work relationships. In this formal socialization context, the organization strives to provide a forum for these positive interactions with plenty of opportunities for shared activity. Decisions to rely on colleagues or share information with them will be made continually throughout the lifespan of working relationships, but the period of socialization offers a unique context from which to gain an improved understanding of trust development.

The prevailing initial trust theories (McKnight et al., 1998; Meyerson et al., 1996) suggest that newcomer trust may not have a zero baseline. The socialization literature agrees that early newcomer perceptions develop rapidly (Saks & Ashforth, 1997) and are strong predictors of attitudes and outcomes at a later date (Bauer & Green, 1994). In the socialization context, organizations strive to provide newcomers with a positive socialization experience and a positive forum for newcomers to interact with each other thus encouraging trusting behaviors and the development of stronger peer relationships (Homans, 1950). Development of trust in a relationship is often proposed to be dependent on trustor experiences during a history of interactions with the trustee which is built up over a period of time. If trust begins at a non zero

baseline, it is expected that the positive experience of a trusting relationship with coworkers will motivate employees to interact with their new organizational environment with the intention of building social resources thus reinforcing levels of trust in colleagues (Fredrickson, 2001). As individuals perceive themselves engaging in trust behaviors, their positive expectations of coworkers will be strengthened (Bem, 1972), and their trust levels will increase in a self reinforcing spiral. This potential trust trajectory is in line with the proposed feedback loop in Mayer and colleagues' (1995) model of interpersonal trust and Zand's (1972) argument that trust is a self reinforcing phenomenon where trust leads to more trust. Theoretically then it can be expected that trust development during socialization should develop in an upward trajectory.

Longitudinal field research on coworkers has tended to employ a time lagged design (e.g. Colquitt et al., 2011) rather than a truly longitudinal repeated measure of variables across time periods. Further, previous longitudinal research investigating trust has focused predominantly on trust at a team level of analysis. Reciprocal trust between teams has been demonstrated as a longitudinal process where team trust is continually revised based on up to date trustworthiness perceptions following interaction between the teams (Serva, Fuller, & Mayer, 2005). Further empirical evidence from team research also suggests that trust tends to increase over time (Wilson, Straus, & McEvily, 2006), grows more complex and multidimensional as relationships develop (Webber, 2008), and that early trusting beliefs have a significant impact on beliefs two months later (Crisp & Jarvenpaa, 2013). In general, team level results are in line with the proposition that the mechanism through which trust develops is positive exposure to the other party. During their first months in an organization, continued exposure to the common learning experiences and positive social support typical of institutionalized socialization gradually decreases newcomer uncertainty in predicting the behavior of their peers and increases feelings

of social comfort (Kim, Cable, & Kim, 2005). This social environment provides the ideal forum for coworkers to engage in positive interaction. Therefore it is hypothesized:

Hypothesis 1: Newcomer intention to engage in trust behaviors, reliance and disclosure, increases over time.

Individual Differences in Newcomer Trust Development

In addition to improving our understanding of general patterns of trust development between new colleagues, insight into the individual differences that exist in how trust behaviors develop is vital to achieving a more nuanced picture of relationship processes. Trust has often been conceptualized by psychologists as a dispositional characteristic or personality trait of the trustor which is not specific to any referent or context. While this approach has been challenged in recent years, Mayer et al.'s (1995) positioning of propensity to trust as a separate but influential variable in trust decisions has revived the popularity of the construct. Although trust as a trait variable is likely to have a distal influence on trust processes in general, propensity to trust is theoretically positioned as an antecedent to trust and an influence on the impact of trust cues (Mayer et al., 1995). Mayer and colleagues define propensity to trust as a "general willingness to trust others" and suggest that propensity to trust may provide trustors with the ability to make a leap of faith (1995: 715). An individual's propensity to trust provides them with a generalized expectation about the reliability of others (Rotter, 1971) which is proposed to act as a filter through which the actions of other people are interpreted (Govier, 1994).

Colquitt et al. (2007) reported the correlation between propensity to trust and trust as significant but small, suggesting that the relationship may be context dependent. For example, it has been suggested that propensity to trust is more critical to trust formation in ambiguous situations (Gill, Boies, Finegan, & McNally, 2005), and those which lack personal trust cues

(Grant & Sumanth, 2009). Furthermore, as communication frequency in a dyad increases, propensity to trust becomes less important (Becerra & Gupta, 2003). Accordingly, propensity to trust can be considered more central to the formation of trust if the trustor does not have sufficient information about the situation or trustee to form an accurate expectation or belief. This makes propensity to trust uniquely relevant to new trust relationships and in particular newcomers in a socialization context. Previous research tended to employ laboratory or time lagged cross sectional designs making it impossible to track the impact of propensity to trust over time within a relationship. We propose that in a socialization context, where no preceding relationship history exists between newcomers, propensity to trust will impact initial trust levels as little information is available to the trustor about coworker traits or behavior. As this new information becomes available to the new recruits, propensity to trust should decrease in significance as a trust source. Accordingly, we hypothesize:

Hypothesis 2: Propensity to trust is significantly related to initial intentions to engage in trust behaviors (reliance and disclosure) but not to changes in reliance and disclosure intentions over time.

Cues for Trust Development

A central question in trust research has been which personal, relational or situational factors combine to allow trustors to make a decision to engage in trusting behavior. Recent debate about the relative importance of particular trust cues (e.g. Dietz, 2011) echoes previous calls (Schoorman, Mayer, & Davis, 2007) for researchers to establish the time frame in which particular predictors of trust exert their influence. A wide array of micro and macro cues have been proposed as antecedents to trust. For instance, the importance of the three factor model of trustworthiness (competence, benevolence and integrity; Mayer et al., 1995) is widely accepted,

as is the importance of repeated positive interaction over time (Lewicki & Bunker, 1996). While this information is likely to play a role in trust development during socialization, other trust cues may be more specific to the context of new work relationships.

In their discussion of the formation of swift trust, Meyerson et al. (1996) posit the importance of the reputation associated with occupational roles as an important cue when interacting with unknown trustees. Social identity theorists suggest that newcomers form a stereotype of prototypical group members which guides their expectations for the behavior of individuals associated with that prototype (Hogg, 2000). Recent theoretical work has supported the notion that groups (e.g. members of a particular occupation) can carry certain trust related attributes such as benevolence and competence as part of their stereotype, impacting the way that strangers feel and act towards members of that group (Cuddy, Glick, & Beninger, 2011). Trust predicated on the role occupied by the trustee is based on our perception of the barriers to obtaining that role, the adequacy of the education and training needed to fulfill that role, and the social mechanisms which govern adherence to role typical behavior (Kramer & Lewicki, 2010). Empirically, role based trust has been shown to be related to individual trust in supervisor at the early stages of a relationship (Shamir & Lapidot, 2003).

In addition, McKnight et al. (1998) argue that initial formation of trusting beliefs is informed by cognitive and institutional cues including the categorization of the other party and perception of safeguards inherent in organizational structures. The construct of rule based trust refers to an employee's sense that the organizational system supports trust between coworkers through the empowerment of trust behaviors and the constraint of untrustworthy acts (Møllering, 2012). The simultaneous empowerment and constraint of behavior is facilitated by the existence of injunctive norms that signal to newcomers the behavior expected of good employees, and

descriptive norms which communicate the typical behavior in a specific context (Kramer & Lewicki, 2010). The effect of this perception may be even more salient when organizational membership is shared, therefore fostering perceptions of similarity between coworkers (Zucker, 1986).

During socialization, individuals form a social identity and define themselves and coworkers as members of an ingroup or outgroup (Ashforth & Mael, 1989). As newcomers develop a shared sense of identity they form normative schema to guide their perception of the behavior and values of other newcomers as ingroup members (Livingstone, Haslam, Postmes, & Jetten, 2011). Brewer (1996) argues that the depersonalization inherent in this process provides a basis for depersonalized trust in ingroup members and negates the need for personal knowledge in assessing the risk of initial interactions. In line with this, it has been proposed that feelings of identification play a key role in initial trust building (Williams, 2001).

Although a variety of trust cues are available to an individual, it may not be possible for trustors to simultaneously attend to all of this available information. Using the principle of bounded rationality, Bijlsma and Koopman (2003) argue that the entire array of complex antecedents of trust is unlikely to be considered by every trustor in every trust decision. Indeed, it is more probable given realistic information processing and time constraints that individuals choose to attend to a finite number of cues at any one time. Unfortunately, little empirical research exists to provide insight into the relative importance of different trust cues. In fact much of the trust literature has failed to separate common trust antecedents from trust decisions, using cues such as trustworthiness as a proxy for measuring trust.

One theoretical perspective which offers insight into when certain cues might be important was put forward by Kramer and Lewicki (2010). Drawing on previous work, they

propose the concept of presumptive trust describes positive expectations of others founded upon factors such as, perception of the rules embedded in a shared organizational environment (rule based trust), perceptions of the other's role (role based trust) and identification with the trustee. This form of trust is thought to be important when the trustor has little information about a trustee. In the context of socialization, presumptive trust cues are likely to be important early in a new recruit's relationships with their coworkers. Chen and Klimoski (2003) describe the first few days of socialization as an anticipatory phase where expectations of coworkers are formed quickly based on anticipated behavior. At this stage, an individual has access to information about the job title and organizational membership of their colleague but little evidence about any personal characteristics on which they could base a trust decision. In light of the lack of personal information, cooperative behavior relies on the presumption of trust (Kramer & Lewicki, 2010), freeing up cognitive resources to allow the new recruit to perform effectively in their new environment (Mayer & Gavin, 2005). In essence, presumptive trust during socialization draws on newcomers' schema of their new organization and the delineation of roles and groups within it. The social categorization processes underlying socialization suggest that the desire to reduce uncertainty in the new work environment should drive the use of heuristics to guide initial interactions and allow for the rapid building of coworker relationships.

This research draws on the theoretical work of Kramer and Lewicki (2010) and Mayer et al. (1995) to distinguish between presumptive trust cues and personal trust cues. *Presumptive trust cues* refer to social and environmental information including role based trust, rule based trust and identification. *Personal trust cues* describe those attributes of the trustee described by the trustworthiness dimensions, competence, benevolence and integrity. As a relationship develops and more personal trust cues are available, reliance on presumptive trust is thought to

diminish. McKnight and Chervany (2005: 29) suggest that the initial trust phase ends once “parties gain verifiable information by first hand interactional or transactional experience.” In this way, presumptive trust cues should function in a similar manner to trustor dispositional factors such as propensity to trust, important at the start but with a diminishing impact over time. What is less clear from the literature is how the shift from presumptive to personal cues takes place and when. Although evidence from longitudinal trust research is limited, it has been demonstrated that initial trust is predicted by unique antecedents to those that impact more mature relationships (e.g. Jarvenpaa, Knoll, & Leidner, 1998). This study proposes that as newcomers are socialized into their new organization and as they gain access to more personal information and insights about their newcomer peers, their willingness to engage in trusting behavior with these colleagues will be based increasingly on personal rather than presumptive trust cues.

Hypothesis 3a: Presumptive trust cues (rule based trust, role based trust and identification) are positively related to initial intentions to engage in reliance and disclosure with coworkers. Over time the significance of this effect will decrease.

Hypothesis 3b: Personal trust cues (competence, benevolence and integrity) show a smaller relationship with initial intentions to engage in reliance and disclosure with coworkers. Over time the significance of this effect will increase.

METHOD

Participants

Participants in this study were new employees in the Irish practice of a Big 4 international accountancy and consultancy firm. All participants are knowledge workers, a sector of the workforce that is both growing (Chen & Klimoski, 2003) and central to the economy (Kessels, 2004). The average age of the sample was 22.26 years (*SD* 1.23) and participants were

54.9% female. All participants (n=193) had completed their bachelors degree with 36.3% completing masters level courses. New recruits all began work for the organization on the same day, and were assigned to working groups within an hour of joining the organization.

Research Design

This study was designed to collect data longitudinally over four waves of data collection. Previous longitudinal trust studies have examined trust using between two and four data points and with time lags ranging from one week to six months (e.g. Colquitt et al., 2011; Jarvenpaa et al., 1998; Serva et al., 2005; Shamir & Lapidot, 2003; Webber, 2008; Wilson et al., 2006). In this study all data was collected within the first three months of participant's employment with the organization. This time period was selected as it (a) represents a theoretically acceptable time frame for the initial socialization of new employees (Chen, 2005) and (b) allowed new recruits sufficient time to interact with their coworkers and develop more stable working relationships where trust behaviors would have time and opportunity to occur. Time intervals were spaced unevenly over the three months with data collected in week 1, week 4, week 10 and week 12. Unequal intervals were logistically necessary due to a series of work experience sessions organized for new recruits which meant that they were unavailable to the researcher at certain times. Although this design limits the availability of information about the middle period of socialization it also represents an advantage of the study as longitudinal research which collects data in waves that are spread away from the midpoint of the data collection period offer greater reliability and precision in their measurement of change (Singer & Willett, 2003).

The socialization context in the organization can be described as a collective, formal, fixed and sequential learning environment (Van Maanen & Schein, 1979) where newcomers attend scheduled group socialization activities, are clearly identifiable as new recruits and are

provided with a detailed timetable of their expected socialization experience. Within the sample, participants were assigned to a smaller working group by the organization. The smaller working groups consisted of up to 30 trainee accountants and were formed due to logistical reasons concerning the structuring of the socialization period and the training facilities available. These smaller working groups formed the basis of the referent in this study. At the end of the socialization period, newcomers were assigned to new project teams with more experienced workers within the organization. Due to the nature of their work, it is expected that the structure of these project teams would change regularly based on client needs as is typical of the multiplex organizational structure of large modern professional service firms (Greenwood, Morris, Fairclough, & Boussebaa, 2010). Understanding the development of trust in collective groups is important due to the increasingly team based structure of modern organizations (Fulmer & Gelfand, 2012). In professional service firms in particular, groups and project teams are a typical feature of work and it is through group cooperation that professional service firms generate knowledge and solutions for their clients. Accordingly, in this context the coworker group was considered the most appropriate referent for the study of trust development. The use of a multiple coworker referent for trust is in line with previous research in the area (e.g. Colquitt et al., 2011; Schaubroeck, Peng, & Hannah, 2013). Additionally, as data collection began on the first day of employment, it was not possible to identify stable coworker dyads to act as trust referents.

Participants were recruited to the study during induction training on their first day of work. Participation in the study was voluntary, unincentivized, and the objectives and longitudinal nature of the research was explained fully at Time 1. Out of 198 potential respondents, 98.5% chose to participate. Questionnaires were completed by participants in the presence of the first author during working hours at training sessions, and participants were

allowed to withdraw from the study at any time. Attrition of participants is a common issue in longitudinal research; however attrition rates in this study were low. Following Ployhart and Vandenberg's (2010) advice that a minimum of three data points is required to demonstrate nonlinear growth over time, participants who responded on less than three occasions were excluded from the study resulting in a final sample of 193 (and overall response rate of 97.5%). During hypothesis testing, missing data was estimated at random using a full information maximum likelihood method (FIML; Enders & Bandalos, 2001) in order to avoid the introduction of bias (Ployhart & Vandenberg, 2010).

Measurement

All variables were assessed at each of the four time points with the exception of propensity to trust, which was measured only at Time 1. The order of scales within the survey was randomized between time points. Participants were instructed to answer questions using coworkers in their socialization group as the referent. All items were assessed using a Likert type response scale ranging from one to seven.

Trust Intentions. Intention to engage in trusting behavior was measured using the Behavioral Trust Inventory (Gillespie, 2003). This scale contains ten items organized into two dimensions of trust behavior, reliance and disclosure, each measured using five items. Items were adapted slightly to reflect coworkers as the relevant referent. Participants were asked to indicate "How willing are you to..." A sample item from the reliance subscale is "...depend on your group members to handle an important issue on your behalf." A sample disclosure item is "...discuss how you honestly feel about your work, even negative feelings and frustration." Both scales demonstrated acceptable internal consistency with Cronbach's alpha ranging from .85 to .92.

Trust Cues. Six trust cues were assessed in this study: competence, benevolence, integrity, rule based trust, role based trust and group identification. The cues were selected based on previous literature which suggests that identification, role and rule perceptions form a basis for presumptive trust while competence, benevolence and integrity are commonly considered as the most important factors in more personal trust decisions.

Presumptive Trust Cues. We used a four item scale developed by McKnight and Chervany (2005) to measure perceptions of rule based trust. The scale assessed perceptions of the structural assurance provided to the trustor by the environment in which they interacted with coworkers. A sample item from the scale is “Fairness to employees is built into how issues are handled in our work environment.” Coefficients alpha for the scale ranged from .92 to .96 across the four time points. Role based trust was measured using a nine item scale from Grant and Sumanth (2009). Items were changed to reflect perceptions of the trustworthiness of trainee accountants as a category. This referent was chosen as “trainee accountant” reflects the job title or role of all the newcomers in the cohort and hence provides an appropriate assessment of role based trust perceptions regarding other trainees in the newcomer’s socialization group. The scale demonstrated acceptable levels of reliability across all four time points (.89 to .96). Group identification was measured using the Mael and Ashforth (1992) scale. One item was excluded from the scale (“If a story in the media criticized my group, I would feel embarrassed”) due to its lack of face validity in this context. The remaining five items showed good levels of internal consistency with coefficient alphas ranging from .75 to .88.

Personal Trust Cues. The three personal cues were measured using the well established Mayer and Davis (1999) trustworthiness scale. The scale uses six items to measure competence (e.g. I feel very confident about the skills of the other trainees in my group), five items to

measure integrity (e.g. The other trainees in my group have a strong sense of justice) and six items to measure benevolence (e.g. The other trainees in my group would not knowingly do anything to hurt me). The range of coefficient alpha across Times 1 to 4 was competence .89 to .95, benevolence .85 to .92, and integrity .79 to .84.

Propensity to Trust. Individual differences in trust propensity were measured using a seven item scale developed by Jarvenpaa et al. (1998). Although a number of alternative propensity to trust scales were considered, Jarvenpaa et al.'s (1998) scale represented the best face validity for the socialization context. The scale was developed for use in a population with similar age characteristics and an analogous research context where respondents were required to work with previously unknown others in groups. Items were adapted to suit the context of this study in line with previous use of the scale (Yakovleva et al., 2010). A sample item from the adapted scale is "most people tell the truth about the limits of their knowledge." Following initial data analysis, one negatively worded item ("If possible, it is best to avoid working with people on projects") was removed from the scale due to a negative impact on internal consistency. Reliability for the remaining six items was above commonly accepted levels (.71).

RESULTS

Data analysis was conducted using LISREL (Jöreskog & Sorbom, 1993) and MPlus (Muthén & Muthén, 1998-2007). Before hypotheses were tested the measurement model was assessed using confirmatory factor analysis (CFA) and measurement invariance (MEI) testing. Model fit is interpreted using four goodness of fit indices: a) the chi square test, b) the comparative fit index (CFI; Bentler, 1990), c) the Tucker Lewis index (TLI; Bentler & Bonett, 1980) and d) the root mean square error of approximation (RMSEA; Steiger, 1990). Kline (2005) advises that good model fit can be inferred when the chi square/degrees of freedom ratio falls

below 3 and CFI and TLI rise above .90. In addition, RMSEA indices of less than .08 generally indicate adequate model fit (Schermelleh-Engel, Moosbrugger, & Muller, 2003).

Confirmatory Factor Analysis

CFA was performed to determine the best model fit for the data, to compare alternative models the chi square difference test was used (Bentler & Bonett, 1980). First, we examined the factor structure of Gillespie's (2003) Behavioral Trust Inventory. Analysis revealed that a two factor structure where reliance and disclosure are treated as separate dimensions represents a significantly better fit for the data ($\chi^2(32)=61.21$, $p<.05$, CFI=.98, TLI=.97, RMSEA=.07) than a one factor model ($\chi^2(33)=238.08$, $p<.001$, CFI=.86, TLI=.81, RMSEA=.18). Next we compared a nine factor target model, where each of the subfactors of trust and trust cues represent distinct factors, to alternative models where some or all of these factors are collapsed. Results in Table 1 show that the target model achieved superior fit to each of the alternative models. Similar results were found across alternative waves of data collection. Due to the self report nature of our measures, common method variance was assessed using the single method factor procedure (Podsakoff, MacKenzie, & Podsakoff, 2012) which indicated that this was not a problematic source of bias in this data. Table 2 displays the descriptive statistics for all variables.

Insert Table 1 and 2 about here

Measurement Invariance

We examined the MEI, stability of the conceptual framework participants use to respond to survey items, before proceeding with longitudinal analysis. Reliance and disclosure were tested using three steps, with increasingly stringent constraints, following the guidelines set out by Vandenberg and Lance (2000). The likelihood ratio test (LRT; Bollen, 1989), and changes of .01 or greater in CFI (Cheung & Rensvold, 2002) were used to compare models.

In the first step, we assessed configural invariance to check if the two factor structure generalizes over time. Acceptable model fit (χ^2 (572)=1188.92*, CFI=.95, TLI=.94, RMSEA=.07) indicates that two factors exist in every data wave and that the same items load onto reliance and disclosure at each time point. The second step involves a test of metric invariance where item factor loadings are constrained to be equal across measurement waves. Goodness of fit indices (χ^2 (596)=1233.83*, CFI=.95, TLI=.94, RMSEA=.07) were compared to the configural model; no change was observed in CFI and the decrease in model fit indicated by the $\Delta\chi^2$ was not significant at the $p<.001$ level. Thus metric invariance was established.

Finally, we assessed scalar invariance by constraining the item intercepts to be equal across data waves. A significant $\Delta\chi^2$ and change in CFI (χ^2 (620)=1390.36, $p<.001$, CFI=.94, TLI=.93, RMSEA=.08) indicate the existence of some level of noninvariance of item intercepts. Following the recommendations of Byrne, Shavelson, & Muthén, (1989), we investigated further in an attempt to achieve partial scalar invariance. We examined the tau parameters of the metric invariance model and constructed 95% confidence intervals to identify items which functioned differentially across data waves and minimize the risk of false detection (Yoon & Millsap, 2007). Using these confidence intervals, we identified three items (2 disclosure and 1 reliance) which showed higher levels of variance over time and removed the constraints on these items one by one. The items which displayed the highest levels of variance were: “Rely on your group members to represent your work accurately to others”, “Discuss how you honestly feel about your work, even negative feelings and frustration”, and “Discuss work-related problems or difficulties that could potentially be used to disadvantage you.” Allowing the intercepts to vary on these three items resulted in a model which showed no difference in CFI and a change in χ^2 that is not significant at the $p<.001$ level (χ^2 (611)=1267.96, CFI=.95, TLI=.94, RMSEA=.07).

As our partial scalar invariance model meets previously recommended criteria (Byrne et al., 1989; Cheung & Lau, 2012), we concluded that the concepts of reliance and disclosure have sufficiently stable properties over time and were suitable for longitudinal analysis.

Insert Table 3 about here

Hypothesis Testing

We used a latent growth modeling approach to test our hypotheses. First, longitudinal change in the two subfactors of trust, reliance and disclosure, were modeled using univariate latent growth modeling. In line with accepted practices in the management literature, four latent growth models were fit to each variable to assess the structure of the factor residuals and to determine whether change in trust is linear. Linear change was modeled by fixing the change factor loadings in the model equal to 0, 1, 3, 3.66 in line with recommendations of Lance and colleagues (Lance, Meade, & Williamson, 2000). The uneven increases in factor loadings are calculated and rescaled to reflect the unevenly spaced measurement occasions used in data collection where an increase of one represents an interval of three weeks. Nonlinear or optimal change was modeled by fixing the first two change factor loadings (to 0 and 1 as before) and leaving the second two free to be estimated by MPlus. For both linear and optimal models, we compared nested models where the residual variances were freely estimated (heteroscedastic) to those where the residuals were constrained to be equal (homoscedastic; Willett & Sayer, 1994). Table 4 displays the results of the eight univariate models. Results indicated that the optimal change function significantly improved model fit in comparison to the linear model for both reliance and disclosure. Constraining the residual variances resulted in a poorer model fit for reliance. Consequently, an optimal heteroscedastic model ($\chi^2(3)=10.41$, $p<.05$, CFI=.96, TLI=.93, RMSEA=.11) was accepted as the most accurate representation of change in reliance

over time. When homoscedastic residuals were added to the optimal disclosure model a small but non significant increase in the chi square index was observed. As constraining the residual variances provides a more parsimonious model structure, an optimal homoscedastic model ($\chi^2(6)=14.76, p<.05, CFI=.95, TLI=.94, RMSEA=.09$) of disclosure was retained.

Figure 1 displays the mean latent growth curves for reliance and disclosure. Results support Hypothesis 1 indicating that levels of reliance and disclosure increase over time. The slope factor mean for reliance and disclosure was positive and statistically significant indicating that participants' intention to rely on and disclose information to their coworkers increased over time. The results also indicate that the rate of growth was faster during the initial period as participants first began to gather information about their new colleagues. In addition to the increase in trust levels proposed by Hypothesis 1, our results offer a number of interesting findings with regards to the pattern of trust development in new relationships. A statistically significant factor variance estimate for both initial status and slope of reliance and disclosure indicates that some individuals report higher intentions to engage in reliance and disclosure behaviors from the first day of their new job. A significant factor variance estimate also exists for the slope of both trust intentions suggesting that some newcomers' rates of reliance and disclosure increased at faster rates than others. Furthermore, there is a negative and statistically significant relationship between the initial status and slope of both variables suggesting that individuals with higher initial levels of trust intentions showed less change over time than those that began with lower levels. These parameters are summarized in Table 5 below.

Insert Table 4, Table 5 and Figure 1 about here

Hypothesis 2 proposed that propensity to trust is related to initial status of trust intentions but not to changes in reliance and disclosure over time. This was tested by regressing the initial

status and slope of reliance and disclosure on propensity to trust. Augmenting the model with propensity to trust resulted in good model fit [Reliance - χ^2 (5)=10.49, CFI=.97, TLI=.95, RMSEA=.08; Disclosure - χ^2 (8)=15.95, $p<.05$, CFI=.95, TLI=.94, RMSEA=.07]. Results of the model indicate that propensity to trust is significantly related to initial status in reliance ($\beta=.23$, $p<.05$) and disclosure ($\beta=.21$, $p<.05$). Propensity to trust is unrelated to the rate of change in either variable. Overall, these results provide support for Hypothesis 2.

To test Hypothesis 3a and 3b, eight augmented latent growth models (four reliance, four disclosure) were created. These models allowed us to estimate the structural relationships between each of the trust cues and levels of reliance and disclosure at different points in the latent growth curve. Biesanz and colleagues recommend that the origin or zero point for time in a latent growth model should be coded at the point in the model where the researcher would like to examine effects and relationships (Biesanz, Deeb-Sossa, Papadakis, Bollen, & Curran, 2004). In our analysis, we generated four augmented models for each variable (reliance and disclosure) and changed the coding of time in each model to reflect the stage of socialization we were interested in examining. For instance, to assess the structural relationships of trust cues with trust at Time 3 the first two change factor loadings were freely estimated while the second two were set at 0 and 1. Next, the six trust cues were regressed onto the intercept of the latent growth models to test which cues were significant. In each model, propensity to trust was included as a control variable to account for the influence of this individual difference on the perception and use of trust cues. Results of the analyses are presented in Table 6. Hypotheses 3a and 3b, which proposed that the impact of presumptive trust cues would decrease over time while the impact of personal trust cues increased, are not supported by the data. However, although the hypothesized presumptive-personal shift is not apparent, it is evident from the data that different trust cues

predict intentions to engage in reliance and disclosure trust behaviors. The changing significance of the covariate predictors in the latent growth models also suggests a pattern may exist in the importance of trust cues over time. Potential interpretations of these results will be addressed in the discussion section.

Insert Table 6 about here

DISCUSSION

The primary aim of this paper was to examine the pattern of trust development in newcomer coworker relationships over time and to determine the cues which inform employee intentions to engage in trusting behaviors. Specifically, we addressed three research questions. How can we expect trust levels to change as a relationship matures? Are there individual differences in the development of trust over time due to dispositional trust? And, which trust cues inform our trust decisions at different stages of a relationship? Our findings provide a nuanced model of trust development which encapsulates within one context answers to these important questions.

Firstly, this research demonstrates the pattern of reliance and disclosure based trust development during socialization. Understanding true change in a variable requires repeated measurement of the variable at a minimum of three time points (Ployhart & Vandenberg, 2010). To our knowledge, this paper represents the first such study examining intentions to engage in trust behavior. Findings indicate that coworker trust development is nonlinear with faster rates of growth at the beginning of a relationship when employees are just beginning to get to know their coworkers. Previous theoretical discussion of initial trust in relationships supports this pattern of development (Lewicki et al., 2006). Initial trust judgments are often based on cognitive cues

from the environment, perceptions of control and first impressions of the trustee allowing them to be formed more quickly than stable knowledge based beliefs (McKnight et al., 1998). McKnight et al. suggest that these initial trust levels are likely to be relatively robust as confirmation bias (Watson, 1960) allows individuals to selectively attend to coworker behaviors. In line with our findings that the rate of change in trust abates after the initial month, establishing trust in more mature relationships is typically conceptualized as a more gradual process following repeated personal interactions (Lewicki & Bunker, 1996).

The trajectory of change in newcomer trust intentions is at its most stable between Times 2 and 3. Rousseau et al.'s (1998) depiction of trust development is consistent with this pattern and suggests that after a period of trust building a phase of stability in trust levels is likely. The self regulation of willingness to be vulnerable in workplace relationships involves vigilant monitoring of coworkers and the environment over time which may undermine and distract from steady changes in trust intentions (Kanfer & Ackerman, 1989). It is possible that the leveling off of change between Time 2 and 3 reflects this cognitive overload. This pattern of change is also in line with the development of other employee variables during socialization. A decreased rate of change in trust intentions may reflect a shift from the encounter to the adjustment phase of socialization (Chen & Klimoski, 2003). Saks and Ashforth (1997: 258) argue that "rapid change followed by relative stability" characterizes the growth pattern of many socialization processes, especially those related to group interactions. Recent work by Solinger and colleagues confirms that change trajectories during socialization transverse several periods with differing rates of growth, stability or decline (Solinger, van Olffen, Roe, & Hofmans, 2013).

The second hypothesis relates to the impact of stable individual propensity to trust on trust intentions. Our findings support the hypothesis that propensity to trust is positively related

to the initial status of trust intentions but not to changes in trust over time. These results are consistent with cross sectional work in the area. Typically, empirical research has shown that propensity to trust has a relatively consistent relationship with trust (Colquitt et al., 2007) and that this relationship is more important when personal information about the trustee is less salient (Grant & Sumanth, 2009). This study provides longitudinal support for this contention and is the first study to do so for Gillespie's (2003) conceptualization of trust as a behavioral intention. The pattern of results indicates that the expected influence of propensity to trust holds across both reliance and disclosure intentions. Overall, this research suggests that propensity to trust is an important influence during initial newcomer meetings but does not have an ongoing impact on coworker relationships during socialization once additional trust cues become plentiful.

Finally, this research answers recent calls from trust theorists (e.g. Dietz, 2011; Li, 2012) to clarify the relative importance of a variety of trust cues during trust development. The longitudinal design of the study revealed that the impact of trust cues is predominantly influenced by the type of trust behavior in question and may also be affected by the relationship stage. In this context, the shift from presumptive to personal trust cues as a basis for trust judgments (Kramer & Lewicki, 2010) was not supported. Instead, our findings indicate that perceptions of coworker competence and benevolence are used as a basis for trusting behaviors, reliance and disclosure respectively, regardless of the relationship stage. The importance of personal trust cues so early in the trusting relationship indicates that newcomers are making evaluations of coworker trustworthiness from the moment they meet. Experimental research on initial impressions supports this, suggesting that within moments of a first encounter individuals can form impressions of trustworthiness facets based on trustee facial features (e.g. Willis & Todorov, 2006). Moreover, our findings indicate that newcomers are sufficiently confident in

these trustworthiness judgments that they are willing to base their decisions about trusting behavior on them.

The personal trust cue of benevolence was related to disclosure across all four time points. This positive relationship is potentially a consequence of the affective nature of both concepts. Although the original distinction between affective and cognitive trust was drawn by McAllister (1995), theorists have highlighted similarities between affective trust, benevolence and Gillespie's (2003) disclosure dimension (Colquitt, LePine, Piccolo, Zapata, & Rich, 2012) while perceptions of competence are proposed to represent a purely cognitive assessment of performance (Chen, Saporito, & Belkin, 2011). In line with this, a significant relationship was observed between competence and reliance across all four time points. This result is also consistent with recent cross sectional work by Alexopoulos and Buckley (2013) which posits that both competence and reliance represent professional, cognitive forms of trust perception and that affect based trust and cognition based trust may become mutually reinforcing as relationships mature (Alexopoulos & Buckley, 2013).

Interestingly, in this context integrity appears to be a less important cue for trust decisions than the other personal trust variables. Findings indicate that integrity is significantly related to reliance only at one time point, in the third month of interaction. This result is surprising and contrary to research with student virtual teams where integrity and competence were found to be antecedents of initial trust while benevolence became more important over time (Jarvenpaa et al., 1998). In the context of this research, it may be that highly formalized socialization activities prevented newcomers from observing their coworkers in situations where their integrity could be tested thus delaying the development of integrity perceptions or undermining participant confidence in their judgment of coworker integrity. Alternatively, it is

possible that these findings reflect the nature of the trust referent which can moderate the relationship between trust antecedents and trust (Colquitt et al., 2007). Colquitt and colleagues report that the meta analytic correlation between trust and integrity is substantially higher for trust in leader ($r = .67$) than for trust in coworker ($r = .13$). Moreover, where the focus of trust is a group rather than an individual, integrity cues may be more time consuming or difficult for individuals to collect. In the course of day to day interactions with their socialization group, the moral values of group members may not be particularly salient. In contrast, within this social training context, information on group member ability and job related knowledge or skill (competence cues) and attitudes towards looking out for and helping colleagues (benevolence cues) would be more readily available.

Overall, the findings relating to presumptive trust cues present a less straightforward pattern of influence. In this context, role based trust was not significantly related to either reliance or disclosure intentions at any time period contradicting existing initial trust theory (e.g. McKnight et al., 1998). Previous research in an Israeli military setting has provided support for the relationship between role based trust and initial trust in leaders (Shamir & Lapidot, 2003). Post hoc analyses of indirect relationships in our data suggest that the impact of role based perceptions is mediated by perceptions of personal trust characteristics. This causal ordering appears to offer tentative support for the argument that individuals use multiple sources of evidence for forming trustworthiness perceptions (Dietz & Fortin, 2007). It was also predicted that group identification would act as a presumptive trust cue, important to early newcomer trust intentions but less significant as more personal cues became available. However, findings indicate that group identification had a significant relationship with early reliance intentions but not disclosure. It may be that a lack of certainty in early group identification perceptions leaves

newcomers feeling more personally vulnerable when it comes to decisions to disclose personal information as opposed to relying on colleagues professionally. Alexopoulos and Buckley (2013) suggest that disclosing sensitive information to colleagues with whom one has little shared experience is likely to result in negative consequences unless it is clear that both parties share clear norms for disclosure. Empirical studies agree that subjective norms and an awareness of the expectations of other parties are strong predictors of intentions to share knowledge (Brock, Zmud, Kim, & Lee, 2005). Although these norms and shared expectations are likely to arise from high group identification they are unlikely to be salient on the first day at work. In contrast, Alexopoulos and Buckley (2013) identify reliance intentions as a more professional, task related form of trust that is more likely to be predicted by nonpersonal cues such as identification. Group identification is thought to be a particularly important predictor of task related behaviors and motivations when the social identity of that group is salient (van Knippenberg, 2000). On their first day in this organization the identity of newcomers as members of their group was made salient as they were assigned to their group immediately, information regarding the socialization schedule was group specific, and instructions were distributed on a group by group basis.

Additionally, and contrary to Hypothesis 3, group identification showed a positive and significant relationship with both reliance and disclosure intentions at the end of the three month period. Although group identification has been proposed as a component of presumptive trust (Kramer & Lewicki, 2010), earlier theoretical work suggests that identification is a component of more mature trust relationships and is a developmental process (Ashforth, Harrison, & Corley, 2008). Lewicki and Bunker (1996) proposed a transformational model of trust which posits that trust is based on identification only once the trustor has internalized the values and preferences of a trustee. These findings appear to support their proposition that trust develops from a basis in

knowledge (as informed by repeated interaction and perceptions of the trustee) and then progresses towards an identification based trust relationship. Although identity based trust has been a component of a number of prominent trust models, the relationship between social identification and trust has received limited empirical attention. The relationship between trust and identity is one which requires further investigation. Our findings echo the recent advances in social identity theory which indicate the multifaceted process of identification over time (Sluss, Ployhart, Cobb, & Ashforth, 2012). Traditionally, trust researchers have built soundly on social exchange theory as a theoretical foundation for trust development research and positioned identification as an antecedent of trust, with some exceptions (e.g. Mollering, 2012). It may be that a refocus on social identity theory and self definitional processes relative to trust development is required, particularly in new hire contexts.

Finally, support was not found for the proposal that rule based trust would be significantly related to initial trust intentions but not to trust intentions as the relationship matured. In fact, rule based trust was not related to disclosure intentions at any time point and was significantly related to reliance only at Time 3 and 4. Interestingly, rule based trust was the only cue which decreased over time. Additional latent growth analysis suggests that this decline is significant and functionally linear. It may be that rule based trust is important only when it falls below a certain threshold. Gillespie and Dietz (2009) suggest that certain system based trust information serves to eliminate distrust by constraining discretionary behavior. Once perceptions of rule based trust fall below a certain level it is possible that newcomers no longer see the organizational system as constraining untrustworthy behavior but instead as encouraging trust among coworkers. Alternatively, our results may again be influenced by the socialization context where it is possible that respondents are less certain of their own and others' understanding of the

organizational rules. We know from psychological contract theory that newcomer perceptions of what they can expect from an organization are initially vague and are formed as a result of interacting with the organization and existing organizational members (Rousseau, 2001). Rule based trust may only impact intention to engage in trusting behaviors when newcomers feel a greater level of clarity and confidence in their expectations for organization level structural assurance. In addition, theory suggests that rule based trust is formed on the basis of a common understanding of a system of rules and appropriate behavior within an organization (Kramer, 1999). In this environment, the perception that coworkers possess a common understanding of organizational rules for behavior may arise only as individuals perceive their newcomer cohort as nearing the completion of their formalized socialization process.

This research offers important insights into the theoretical claims of previous researchers. Lewicki and Bunker's (1996) transformation model of trust suggests that the basis and form of trust shifts over time. While the findings of this study support the contention that trust is based on different sources of evidence at different points in a relationship, the pattern of results do not support the specific order suggested by their model. Specifically, Lewicki and Bunker (1996) propose that early trust relationships have a calculative basis characterized by suspicion, fear, high levels of monitoring and fragility. Lewicki and Bunker (1996) suggest that only following a period of interaction do trustors gradually develop knowledge based trust with an understanding of the trustee's likely responses and a level of confidence in trustee characteristics. The findings of the current study suggest that participants in this sample bypassed Lewicki and Bunker's (1996) calculative based trust and began their relationships with trust based on confident positive expectations of their coworkers. This possibility offers an interesting alternative explanation for unexpected findings in future trust development literature. In essence, this research uncovers the

possibility that early workplace relationships may not involve a weighing up of benefits and costs as previously thought but instead knowledge based trust decisions based on confident perceptions of the other party. This is in line with experimental research that suggests individuals form trustworthiness impressions based on very limited exposure to unknown others (Willis & Todorov, 2006).

Our findings also have important implications for the design of future studies on initial trust. Early trust literature has tended to draw on a wider range of trust cues as a basis of trusting decisions (e.g. McKnight et al., 1998; Meyerson et al., 1996). This study provides an opportunity to examine the impact of these early or presumptive trust cues alongside the impact of more traditional, personal trust antecedents. Interestingly, the results of this research suggest that while rule based trust and group identification play a role in driving trust in early coworker relationships, the impact of personal trust cues (benevolence and competence) is both larger in magnitude and more consistent over time.

Limitations and Future Research

Several limitations to the research must be noted. First, our study was conducted using a sample of newcomers who were members of one organization in a particular industry. Although organizational newcomers allow the perfect opportunity to track trust development from day one, further research is needed to investigate whether our findings can be generalized to other contexts. This sample of newcomers is relatively homogenous in age and previous work experience. This homogeneity may have influenced certain variables, in particular factors such as propensity to trust, which may vary with respect to previous positive or negative experiences in the workplace. Future research might investigate whether recent graduates demonstrate different trust development patterns to those who have built up more considerable work experience. The

impact of different forms of socialization on the trust development process presents another avenue for future research. Participants in this sample experienced a socialization period characterized by institutionalized socialization tactics (Jones, 1986) which may have encouraged them to form a stronger social bond with each other often linked to more positive organizational outcomes including acceptance of organizational norms (Cable & Parsons, 2001) and positive work attitudes (Mignerey, Rubin, & Gorden, 1995). In comparison, new organizational members who are faced with a more variable, informal socialization environment may experience higher levels of uncertainty, lower group cohesion and less positive interaction with their fellow newcomers due to a lack of collective socialization activities (Ashforth & Saks, 1996). These factors are in turn likely to negatively impact the trust development process. In addition, the referent used in this study was “other trainees in my group” where some groups had up to thirty members. Future research should investigate longitudinal trust in a more specific referent, for instance with one particular coworker or within a smaller team. Moreover, by studying the process within specific dyads, future research could improve our understanding of the extent to which trust development trajectories are symmetrical. Patterns of trust development in the later stages of this study may also be influenced by the prospect of being reassigned to an alternative group in the near future. This relatively transient structuring of groups is not unusual in the context of professional service work where teams are regularly assembled and disassembled to meet changing client needs (Greenwood et al., 2010). Nevertheless, future research is needed to determine the impact of expectations regarding relationship length on trust intentions and behavior.

Second, our measures were completed by self report increasing the risk of common method bias in our results. However, our longitudinal design and the reordering of questions in

the survey did allow us to limit some aspects of this bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Additionally, results from the single method factor procedure (Podsakoff et al., 2012) indicate that common method bias is not a major concern in this data set. While these steps do not entirely remove the potential for our results to be influenced by the self report nature of our data, they go some way towards reducing the possibility of bias from a limitation that is typical of studies in this field. Perceptions of others and intentions to behave in a certain manner are within person variables which are arguably only measurable through self report (Chan, 2009).

Third, our tests of MEI uncovered a lack of scalar invariance for three of the ten items in the Behavioral Trust Inventory (Gillespie, 2003). In practice, some level of noninvariance is common (Cheung & Lau, 2012; Vandenberg & Lance, 2000). However, testing for MEI is vital in helping researchers to interpret results and offers potentially meaningful information regarding the differential functioning of survey items across time. The noninvariance of certain items from other popular trust scales across cross cultural groups (Wasti, Tan, Crower, & Önder, 2007) and time (Schaubroeck et al., 2013) has already been demonstrated. Our results appear to support the idea that employee understanding of the concept of trust is something that may change over time. Further research is needed to examine why certain items are less stable across time than others and whether the concept of trust is something that adapts and changes continually during an individual's working life or if this change is specific to key periods e.g. joining a new organization.

Finally, this study does not link trust to performance of newcomers during their socialization period. The focus of this study was to provide a deeper understanding of the trust development process rather than the impact of behaviors such as reliance and disclosure on

individual or group performance measures. Considerable previous effort has been made in the literature to firmly establish the link between trust and performance (e.g. Colquitt et al., 2007) however little research has been conducted with a longitudinal design. Further insight could be gained by collecting longitudinal data on performance as trust develops in a new relationship.

Practical Implications

There are several practical implications for management from this research. For example, if initial periods of socialization are most important to changes in trust, management may consider employing methods that consolidate this initial trust baseline and support the development of reliance and disclosure behavior. Structured social interaction associated with social events might be planned to provide the opportunity for newcomers to spend time with each other and facilitate this relational bonding. The fragility of trust and its vulnerability in the face of trust undermining events (Kramer, 1999) suggests that the activities planned for newcomers in the socialization period are likely to have an important impact on whether initial trust is consolidated and built on or quickly destroyed.

Our results also point to the relative importance of cues that newcomers attend to when making trust decisions. In fact we have provided evidence that information attended to in the first hours on a job is crucial. This would imply that managers need to pay particular attention to first day socialization processes and optimize the opportunity for positive and supportive interaction on tasks that require collaboration and encourage trust consolidation. Teambuilding tasks and exercises are also known to influence trust and motivational development (Dirks, 1999). As evidence of coworker competence and benevolence continue to feed trust decisions, it may be useful for managers to craft specific work tasks that would showcase these characteristics. Consideration should be given to allowing time and opportunity for newcomer relationships to

evolve from personal common ground to communal common ground (Priem & Nystrom, 2014), associated with a more resilient form of trust. Finally, while peak trust development occurs early in socialization, our research indicates that development is ongoing. This suggests that management should continue to exert effort in designing tasks and interactive spaces for newcomers to collaborate and build deeper relational ties.

Conclusion

In conclusion, this paper offers insight into the process of trust development using longitudinal research to illuminate the relative importance of a variety of trust cues at different stages of relationship development. Our hope is that future research will continue to shed light on this important topic allowing researchers to further highlight the critical role trust plays in effective working relationships.

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Table 1

Goodness of Fit Indices and Difference Tests for CFA Model Comparisons

Model	χ^2	df	CFI	TLI	RMSEA	$\Delta\chi^2$	Δ df
1. 9 Factor Target Model	1846.43***	1180	.92	.91	.05	-	-
2. 8 Factor (Trust Intentions collapsed)	2040.45***	1188	.90	.89	.06	194.02***	8
3. 6 Factor (Trust Intentions & Trustworthiness collapsed)	2435.53***	1201	.85	.84	.07	395.08***	13
4. 3 Factor (Trust & Trust Cues collapsed)	3536.39***	1213	.72	.70	.10	1100.86***	12
5. 1 Factor (All scales collapsed)	4089.15***	1216	.65	.63	.11	552.76***	3

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 2
Means, Standard Deviations and Correlations

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33			
1. T1Reliance	4.85	0.88	(.85)																																			
2. T1Disclosure	4.11	1.05	.38***	(.85)																																		
3. T1Competence	5.27	0.9	.46***	.34***	(.93)																																	
4. T1Benevolence	4.46	0.88	.32***	.45***	.64***	(.85)																																
5. T1Integrity	4.86	0.82	.42***	.38***	.74***	.72***	(.84)																															
6. T1Group Id	5.11	0.95	.30***	.25***	.42***	.38***	.39***	(.75)																														
7. T1Role based	4.91	0.78	.31***	.30***	.34***	.47***	.45***	.26***	(.89)																													
8. T1Rule based	5.83	0.91	.20*	.25***	.31***	.25***	.31***	.32***	.38***	(.92)																												
9. T2Reliance	5.26	0.76	.39***	.26***	.38***	.29***	.27***	.26***	.30***	.24***	(.86)																											
10. T2Disclosure	4.61	0.96	.06	.36***	.14	.20*	.14	.36***	.18*	.12	.37***	(.85)																										
11. T2Competence	5.46	0.73	.32***	.22*	.48***	.35***	.35***	.22**	.31***	.24***	.62***	.35***	(.89)																									
12. T2Benevolence	4.66	0.85	.18*	.24***	.29***	.47***	.36***	.24***	.34***	.18*	.45***	.46***	.57***	(.85)																								
13. T2Integrity	5.03	0.71	.25***	.24***	.40***	.42***	.44***	.24***	.32***	.27***	.38***	.31***	.64***	.66***	(.79)																							
14. T2Group Id	5.14	0.91	.21*	.15*	.27***	.20*	.21*	.15*	.12	.20*	.31***	.13	.38***	.37***	.47***	(.77)																						
15. T2Role based	5.09	0.77	.23**	.20*	.37***	.44***	.34***	.20*	.39***	.31***	.36***	.20*	.55***	.62***	.66***	.44***	(.94)																					
16. T2Rule based	5.74	0.88	.14	.25***	.35***	.34***	.30***	.25***	.29***	.44***	.32***	.21*	.45***	.43***	.55***	.36***	.57***	(.95)																				
17. T3Reliance	5.29	0.84	.31***	.25***	.18*	.13	.16*	.25***	.24***	.16*	.52***	.32***	.46***	.40***	.42***	.18*	.34***	.20*	(.91)																			
18. T3Disclosure	4.66	1.04	-.01	.20*	-.02	.10	-.01	.20*	.12	.10	.21*	.45***	.30***	.36***	.25***	.03	.23**	.10	.48***	(.89)																		
19. T3Competence	5.49	0.75	.19*	.07	.31***	.20*	.21*	.07	.30***	.18*	.36***	.31***	.59***	.39***	.49***	.28***	.40***	.34***	.57***	.42***	(.92)																	
20. T3Benevolence	4.72	0.88	.02	.08	.11	.33***	.20*	.08	.28***	.09	.21*	.30***	.32***	.51***	.39***	.10	.30***	.22**	.42***	.56***	.60***	(.86)																
21. T3Integrity	5.04	0.71	.09	.08	.13	.16*	.22**	.08	.27***	.10	.21*	.24***	.33***	.38***	.50***	.10	.35***	.26***	.56***	.48***	.68***	.64***	(.79)															
22. T3Group Id	5.12	0.92	.08	.12	.17*	.16*	.15*	.12	.27***	.10	.22**	.23**	.30***	.31***	.35***	.45***	.32***	.15*	.37***	.36***	.49***	.47***	.46***	(.83)														
23. T3Role based	5.02	0.76	.10	.13	.19*	.28***	.22**	.13	.43***	.27***	.27***	.20*	.35***	.38***	.42***	.11	.53***	.42***	.40***	.41***	.53***	.56***	.63***	.47***	(.94)													
24. T3Rule based	5.53	0.99	.23**	.33***	.19*	.15*	.21*	.33***	.39***	.34***	.32***	.24***	.28***	.33***	.38***	.25***	.37***	.53***	.36***	.21*	.37***	.29***	.43***	.36***	.59***	(.96)												
25. T4Reliance	5.49	0.77	.15*	.19*	.13	.14	.14	.19*	.28***	.17*	.42***	.27***	.40***	.36***	.36***	.17*	.31***	.32***	.66***	.41***	.55***	.48***	.56***	.35***	.50***	.47***	(.92)											
26. T4Disclosure	4.97	1.08	-.01	.32***	.09	.15*	.07	.32***	.15*	.16*	.23**	.45***	.26***	.38***	.26***	.15*	.19*	.23**	.38***	.58***	.37***	.40***	.36***	.28***	.41***	.38***	.64***	(.92)										
27. T4Competence	5.65	0.78	.13	.11	.33***	.21*	.24***	.11	.24***	.18*	.34***	.28***	.53***	.35***	.39***	.23**	.30***	.30***	.43***	.31***	.62***	.45***	.46***	.36***	.44***	.33***	.67***	.51***	(.95)									
28. T4Benevolence	5.09	0.97	.01	.12	.11	.22**	.10	.12	.25***	.07	.22**	.24***	.29***	.43***	.36***	.19*	.29***	.27***	.34***	.37***	.45***	.59***	.47***	.33***	.51***	.35***	.59***	.62***	.71***	(.92)								
29. T4Integrity	5.11	0.83	.09	.14	.21*	.26***	.25***	.14	.30***	.26***	.20*	.22**	.33***	.35***	.44***	.17*	.38***	.42***	.38***	.27***	.49***	.48***	.54***	.37***	.60***	.49***	.59***	.46***	.69***	.71***	(.80)							
30. T4Group Id	5.31	1.05	.12	.15*	.16*	.18*	.20*	.15*	.28***	.18*	.25***	.26***	.31***	.36***	.38***	.46***	.33***	.20*	.43***	.33***	.47***	.40***	.42***	.62***	.45***	.40***	.60***	.45***	.57***	.50***	.57***	(.88)						
31. T4Role based	5.19	0.91	.16*	.17*	.29***	.33***	.27***	.17*	.40***	.27***	.29***	.24***	.36***	.44***	.47***	.25***	.52***	.45***	.39***	.35***	.48***	.47***	.51***	.41***	.71***	.54***	.54***	.46***	.52***	.62***	.70***	.56***	(.96)					
32. T4Rule based	5.32	1.01	.16*	.23**	.26***	.16*	.21*	.23**	.23**	.34***	.34***	.15*	.28***	.30***	.30***	.20*	.37***	.41***	.34***	.25***	.31***	.30***	.37***	.28***	.49***	.60***	.48***	.39***	.36***	.38***	.50***	.34***	.51***	(.93)				
33. Propensity to Trust	4.51	0.67	.19*	.17*	.27***	.24***	.27***	.04	.43***	.31***	.21*	.09	.29***	.21*	.23**	.13	.28***	.15*	.20*	.12	.24***	.25***	.17*	.14	.17*	.08	.20*	.15*	.16*	.19*	.14*	.17*	.08	.18*	(.71)			

N = 193

*Coefficient alpha reliability estimates are in parentheses.

* p < .05

** p < .01

*** p < .001

Table 3

Measurement Invariance Tests

Model	χ^2	df	CFI	TLI	RMSEA	$\Delta\chi^2$	Δ df
1. Configural Invariance	1188.92***	572	.95	.94	.07		
2. Metric Invariance	1233.83***	596	.95	.94	.07	44.91**	24
3. Scalar Invariance	1390.36***	620	.94	.93	.08	156.53***	24
4. Partial Scalar Invariance	1267.96***	611	.95	.94	.07	34.13**	15

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 4

Goodness of Fit Indices and Difference Tests for Univariate LGM Model Comparisons

Model	χ^2	df	CFI	TLI	RMSEA	$\Delta\chi^2$	Δdf
1. Reliance Linear Heteroscedastic	36.13***	5	.84	.81	.18		
2. Reliance Linear Homoscedastic	60.12***	8	.74	.80	.18		
Model 1 vrs Model 2						23.99***	3
3. Reliance Optimal Heteroscedastic ^a	10.41*	3	.96	.93	.11		
Model 1 vrs Model 3						25.72***	2
4. Reliance Optimal Homoscedastic	19.04**	6	.93	.93	.11		
Model 3 vrs Model 4						8.63*	3
5. Disclosure Linear Heteroscedastic	29.00***	5	.85	.82	.16		
6. Disclosure Linear Homoscedastic	38.07***	8	.81	.86	.14		
Model 5 vrs Model 6						9.07*	3
7. Disclosure Optimal Heteroscedastic	10.20*	3	.95	.91	.11		
Model 5 vrs Model 7						18.8***	2
8. Disclosure Optimal Homoscedastic ^a	14.76*	6	.95	.94	.09		
Model 7 vrs Model 8						4.56	3

^a Retained Model

* $p < .05$

** $p < .01$

*** $p < .001$

Table 5

Univariate LGM Parameter Estimates

	Reliance (unstandardized)	Reliance (standardized)	Disclosure (unstandardized)	Disclosure (standardized)
SL Mean	.36***	.72***	.49***	1.0***
IS Mean	4.56***	6.85***	4.11***	5.76***
SL Variance	.24**	-	.24**	-
IS Variance	.50***	-	.51***	-
IS with SL	-.23**	-.64***	-.15*	-.44***

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 6

Influence of Trust Cues on Reliance and Disclosure at Each Time Point

Reliance				
Trust Cue	Time 1	Time 2	Time 3	Time 4
Competence	.45***	.54***	.38***	.38***
Benevolence	-.13	.12	.03	.11
Integrity	.13	.05	.19*	-.01
Group Identification	.19*	.07	.01	.26***
Role based trust	.15	.02	-.01	.06
Rule based trust	-.02	-.02	.17***	.20***
Disclosure				
Trust Cue	Time 1	Time 2	Time 3	Time 4
Competence	.01	.19	.14	.15
Benevolence	.43***	.49***	.37***	.54***
Integrity	.13	.04	.04	-.22
Group Identification	.05	-.07	.07	.20*
Role based trust	.07	-.16	.06	.13
Rule based trust	.11	.09	.16	.08

Standardized values are shown.

* $p < .05$

** $p < .01$

*** $p < .001$

Figure 1

Mean Latent Growth Curves for Reliance and Disclosure

