Forms of trust reciprocity and change in established relationships: A dyadic and longitudinal study

Colette Real

BA(Hons), MSc

Thesis submitted for the award of Doctor of Philosophy (PhD)

Dublin City University Business School

Research Supervisors:

Prof. Finian Buckley, Dr. Lisa van der Werff

December 2023

Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy, is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: _____   ID No.: 14212025   Date: 12/12/2023

Acknowledgements

I would like to express my deepest gratitude to my supervisors Prof. Finian Buckley and Dr. Lisa van der Werff for their guidance, encouragement, and support throughout my doctoral studies. I would also like to thank them both for their kindness and patience during some difficult periods which I truly appreciate. I could not have received better mentorship and I look forward to continuing our research collaborations and friendship in the future.

I am indebted to the DCU Daniel O'Hare scholarship scheme for funding this research. Thanks also to all in DCU Business School who have supported me at various stages along the way, especially Prof. Claire Gubbins, Prof. Yseult Freeney, Prof. Edel Conway, Dr. Margaret Heffernan, and Prof. Theo Lynn. Sincere thanks also to Mr. Gerry Conyngham for providing invaluable advice on statistical analysis. I am also grateful to several international scholars who provided helpful advice over the course of this research. Thanks to Prof. Audrey Korsgaard for offering guidance during the conceptualisation stages, to Prof. Mike Baer and the organisers of the 2023 Journal of Applied Psychology paper development workshop for providing constructive feedback regarding future publication, and to Dr. Craig Crossley for his ongoing interest and unfailing enthusiasm.

I would like to acknowledge the support of Enterprise Ireland who kindly facilitated this research, and the DCU Business School Centre for Executive and International Education for all their help, especially Anne-Marie Morrison and Deirdre O'Reilly. In addition, this research would not have been possible without the participation of all the small and medium-sized enterprises who attended the Go Global for Growth top management team strategy implementation programme in DCU from 2017 to 2020. Thanks also to the Faculty Administration team, including Ruth Finnegan, and the Graduate Studies Office, including Jonny Hobson, for helping to navigate the necessary administrative milestones. I would also like to acknowledge the support of the Division of Work and Organisational Psychology of the Psychological Society of Ireland who recognised the value of this research which received the 2022 Peter Saville Early Career Research Award, providing such a great motivational boost in the final stages.

Thanks of course to all my fellow PhD companions in "LG28" who provided plenty of fun and friendship amidst the demands of the programme, and to the members of the

Table of Contents

List of Tables

List of Figures

List of Abbreviations

ABI: ability, benevolence, integrity

APIM: actor-partner interdependence model

CFA: confirmatory factor analysis

ICB: interpersonal citizenship behaviour

LGM: latent growth modelling

PTT: propensity to trust

SEM: structural equation modelling

SME: small and medium-sized enterprise

TMT: top management team

Abstract

Forms of trust reciprocity and change in established relationships: A dyadic and longitudinal study

Colette Real

Trust is generally recognised as a reciprocal process between two parties leading to mutually beneficial outcomes and is critical to the success of organisations. However, theoretical detail on trust reciprocity is sparse and the examination of both parties in a trust relationship is uncommon in empirical studies. Ignoring this relational context can lead to an incomplete understanding of the nature of interpersonal trust, including the reciprocal patterns of influence, trust change over time, and the impact of trust incongruence within a dyad. Drawing on social exchange theory and interdependence theory, this study carries out a longitudinal examination of 230 dyadic workplace relationships involving five waves of data. Structural equation modelling examines three key areas. First, the actor-partner interdependence model provides evidence for reciprocal influences between the two parties. These results highlight that the more relational aspects of trustworthiness (benevolence) reciprocally influence the more affective forms of trust (disclosure), and that the more cognitive forms of trust (reliance) reciprocally influence interpersonal helping. Second, latent growth modelling shows that trust (reliance) is relatively stable whereas trust (disclosure) shows more change over time. Third, moderation analysis demonstrates that the impact of dyadic trust incongruence is detrimental to dyadic helping behaviours only when reliance forms of trust are unbalanced. The results confirm that trust is fundamentally a reciprocal and dynamic phenomenon and highlight different patterns of influence for reliance and disclosure forms of trust within work relationships.

1.   Introduction and Overview

1.1   Introduction

The fundamental role of interpersonal relationships within organisations has long been recognised by organisational and management theorists (e.g., Colbert et al., 2016; Ferris et al., 2009; Ragins & Dutton, 2007). Relationships are composed of reciprocal interactions and exchanges between two people and are dynamic in nature, shaped by the quality of these experiences and by contemporary work contexts (Heaphy et al., 2018). Organisational relationship researchers have examined how people interact with each other, and how these workplace interpersonal exchanges influence individual and organisational outcomes.

Since the mid 1990s trust been identified as playing an essential role in effective workplace relationships (Kramer & Tyler, 1996; Mayer et al., 1995; McAllister, 1995; Rousseau et al., 1998). Trust is often referred to as the social glue that keeps organisations running smoothly and enables cooperative and supportive relationships between employees. Trust is essential to enable discretionary cooperative exchanges between two parties within a trusting relationship where there is no guarantee of reciprocation and, thus, an element of vulnerability and risk. Over the last three decades many empirical studies and meta-analyses have demonstrated the positive influence of trust on a variety of performance, behavioural, and attitudinal outcomes in the workplace (Colquitt et al., 2007; Dirks & de Jong; 2022).

Interpersonal trust, by definition, involves two or more parties, and while this concept is inherent in most trust theory, the reciprocal nature of both parties trusting each other in an exchange cycle is rarely distinguished explicitly. The concept of reciprocal trust is an essential component of social exchange theory (Blau, 1964), but much trust theory takes a unilateral perspective and assigns the roles of trustor (the person who trusts) and trustee (the

person who is trusted) exclusively to each party. Likewise, empirical trust research is usually single-sided and focuses on the trustor's perspective (Fulmer & Gelfand, 2012; Krasikova & LeBreton, 2012). In contrast, some trust theorists are more explicit in their descriptions of the reciprocal nature of trust (e.g., Jones & George, 1998; Lewis & Weigert, 1985). In particular, Ferrin et al. (2007) take an explicitly bilateral perspective and theorise that each party is at once both a trustor and a trustee within a relationship dyad. However, empirical examination of both parties in a trusting relationship dyad is less common (Korsgaard et al., 2015; 2018).

Single-sided approaches to trust research can provide useful information about individual-level phenomenon, but they do not adequately reflect the dyadic nature of trust or give a complete representation of the entire relationship. This misalignment between inherently multilevel dyadic trust theory and individual-level methodological design and statistical analysis can lead to theoretically deficient studies and biased results (Krasikova & LeBreton, 2012). Recent reviews of organisational trust have called for more examination of the relationship between two parties simultaneously (de Jong et al., 2017; Dirks & de Jong, 2022; Möllering, 2019). Several areas have been highlighted where current understanding is lacking. How do both parties influence each other in an interactive way? What is the trajectory of trust over time within the context of a bilateral relationship? Is trust balanced within a relationship, and what are the implications if both parties differ in their level of trust for each other? A dyadic level of analysis which examines both parties in a relationship can offer deeper insight into the nature of interpersonal trust and the fundamentally reciprocal and dynamic character of it (Korsgaard, 2018; Korsgaard et al., 2015, 2018; Krasikova & LeBreton, 2012).

This research study seeks to contribute to the understanding of dyadic trust by examining the characteristics of both parties in a trusting workplace relationship. In doing so, it aims to overcome the limitations of previous single-sided trust research and to provide

a more complete picture of trust in three key areas. First, it aims to examine the reciprocal patterns of influence of each party on the other. Second, it aims to examine the dynamic nature of dyadic trust over time. Third, it aims to examine the level and impact of trust congruence and incongruence within a dyad. In addition, it aims to situate these findings firmly within the context of interdependent work relationships and contribute to field of work relationship theory.

This introductory chapter provides the background and context of this dissertation. It begins with outlining the significance of research into interpersonal trust in an organisational setting. It then presents the aims and objectives of the study and how it will contribute to furthering trust knowledge and to the theoretical understanding of trust. This is followed by an overview of the research questions of the study and the specific hypotheses proposed. The chapter concludes with an outline of the structure of the thesis which is intended to guide the reader through the rest of the dissertation.

1.2   Research Significance

Interpersonal trust is widely accepted as an important predictor of key performance, behavioural, and attitudinal outcomes in the workplace (Colquitt et al., 2007; Dirks & de Jong, 2022). Although a strong theoretical foundation has been developed over the last three decades, supported by an extensive body of empirical research, several aspects of the trust process remain unclear (Dirks & de Jong, 2022). The fundamental premise of this study is that in order to fully understand the multidimensional and dynamic phenomenon of interpersonal trust, both sides of the relationship must be examined (Ferrin et al., 2007; Korsgaard et al., 2015). This implies that the perspectives of both the trustor and the trustee must be considered. It also implies that each party is at once both a trustor and a trustee, intertwined in a reciprocal pattern of trusting the other and being trusted by the other.

Accordingly, this study advances previous trust theory and empirical research by capturing the perceptions of both parties in a trust relationship. It aims to provide a deeper understanding of the dyadic and dynamic nature of interpersonal trust, and to bring unique insights into specific forms trust and their relational patterns of influence within a relationship. This research study is important because it seeks to address gaps in the understanding of interpersonal workplace trust in a number of key areas.

First, this study integrates the trustor and trustee perspective by investigating, simultaneously, both parties in a relationship dyad. It adopts the definition of trust as a psychological state (Rousseau et al., 1998) and also as an emergent property of a dyad (Korsgaard et al., 2015). It moves beyond single-sided unilateral studies of trust which assign roles of trustor and trustee exclusively to each party. Instead, this study conceptualises both of these roles as interchangeable, fluidly moving from one party to the other in a reciprocal exchange cycle. It develops a dyadic process model to understand the dyadic structure of trust and the reciprocal patterns of influence between the two parties. This dyadic level of analysis provides a more complete picture of the nature of interpersonal trust and offers new insights into the factors that foster the reciprocity between two people in the workplace that contribute to individual and organisational effectiveness.

Second, this study takes a longitudinal approach in order to extend the current understanding of trust development over time. Although growing in recent years, longitudinal trust studies are relatively uncommon in organisational research and there is much to learn about the trajectory of trust over time (Korsgaard et al., 2018). Additionally, the combination of dyadic and longitudinal design of the current study allows the examination of the temporal aspects of trust within the context of a two-way relationship, which is an even more infrequent perspective in organisational trust research. Furthermore, many empirical longitudinal trust studies examine new relationships where the level of change is more evident in short spaces of time. The context of the current study offers an

opportunity to examine the trajectory of trust in established relationships. Specifically, it provides evidence of the evolving nature of trust over time in more mature workplace relationships and distinguishes different growth patterns for different forms of trust.

Third, this study addresses deficiencies that have been highlighted in the more commonly employed conceptualisations of trust and adopts a more granular measure of trust (Gillespie, 2003) which has been recommended by trust researchers (Dirks & de Jong, 2022; McEvily & Tortoriello, 2011). It includes reliance-based trust, which is more cognitive in nature and can be considered as a form of professional trust, and disclosure-based trust, which is more affective in nature and can be considered as a form of personal trust (Alexopolous & Buckley, 2013). The conceptual clarity of this measure, and the distinction it provides between reliance forms of trust and disclosure forms of trust can offer new insights into the antecedents and outcomes of trust and its development over time.

Fourth, the context of this study offers an opportunity to broaden the range of organisational settings and trust referents studied empirically and provides an opportunity to demonstrate the application of trust theory to this setting. The sample of top management team relationship dyads from small and medium-sized enterprise firms is a relatively understudied area in organisational research and offers significant potential for trust research, as team members can display a range of interdependence levels. In addition, relationships in small firms can be unconstrained by formal organisational roles and structures and offer the opportunity to examine peer (coworker) relationships. Given the growing prevalence of flatter organisational structures in contemporary work settings, the examination of coworker relationship dynamics is increasingly valuable.

Finally, this study is important in that it allows the integration of theory from other disciplines. In addition to the more commonly invoked theory of social exchange (Blau, 1964), this research draws on the social psychology and personal relationship literature and identifies interdependence theory (Kelley & Thibaut, 1978; Van Lange & Balliet, 2015) as

a meaningful foundation for extending our understanding of trust dynamics beyond current unilateral perspectives. Interdependence theory suggests that relationships are fundamentally defined by the level of dependence each party has on the other. Interdependence theory offers a more comprehensive framework for understanding trust as it addresses the dyadic nature of relationships and the structures and processes that guide how two people influence each other. Trust theory has recognised that variations in interdependence and risk, which are necessary conditions for trust, can influence the level and form of trust between two parties (Rousseau et al., 1998). Thus, the application of interdependence theory to the examination of trust can provide significant insights into a fundamental aspect of trust relationships.

1.3   Research Aims and Contribution

Trust is widely recognised as a reciprocal process between two parties leading to mutually beneficial outcomes such as interpersonal cooperation and is critical to the success of organisations. However, the examination of both parties in a work relationship is uncommon in organisational research in general (Gooty & Yammarino, 2011; Tse & Ashkanasy, 2015) and in trust research (Korsgaard et al., 2015; Krasikova & Le Breton, 2012). Furthermore, while it has long been acknowledged that trust elicits trust reciprocity and that trust can change over time (e.g., Lewicki et al., 2006), the longitudinal patterns of reciprocity and change are not well understood. This research study has four key areas of contribution which are: (1) trust reciprocity; (2) trust development trajectories; (3) trust congruence and incongruence; and (4) trust and work relationships. Each of these contributions is discussed in detail in the following sections.

1.3.1 Trust Reciprocity

This study is founded on trust theory that recognises the relational aspect of trust (Rousseau et al., 1998). It specifically recognises the two-way direction of trust where each party in a relationship is both a trustor and trustee in a reciprocal exchange pattern (Ferrin et al., 2007). It aims to provide empirical evidence to support and extend dyadic trust theory where many questions remain unanswered (Korsgaard, 2018). It builds on previous empirical evidence, in particular the work of Yakovleva et al. (2010), to examine how the trustworthiness perceptions and trust intentions of each party influences the other. It extends this research by employing the behavioural trust inventory (Gillespie, 2003) to measure the reciprocal patterns of influence involving two distinct aspects of trust intentions: reliance-based trust and disclosure-based trust. This distinction is likely to helpful as willingness to rely on another is considered to be primarily a rational choice driven by individual needs, whereas willingness to disclose information to another may be more influenced by affective relational bonds.

This study aims to identify the key factors that influence reciprocity within trust relationships, and to ascertain the unique role of both trust reliance and trust disclosure in the reciprocal process. The influence of all three trustworthiness factors on reliance forms of trust is well established in empirical research (Baer & Colquitt, 2018; Colquitt et al., 2007). Their influence on disclosure forms of trust, and their reciprocal influence on both forms of trust, are less understood. In addition, the influence of trust on both the giving and receiving of help has been established in empirical research, but not both in the same study, not at a dyadic level of analysis, and not with disclosure forms of trust. This study aims to address these gaps in order to shed light on how and where in the trust process each party influences the other. Specifically, the study investigates the distinct influences of each of the three factors of trustworthiness (ability, benevolence, integrity) on the reciprocity of trust between two people. Trustworthiness invokes trust from others, but does it also influence the trust of

the trustor? In addition, the study examines the distinct influence of each form of trust on the reciprocity of interpersonal citizenship behaviours within the relationship. Does each form of trust influence both the giving and the receiving of help within a relationship? In this way, this study addresses the gaps in understanding of reciprocal trust that have been highlighted by trust researchers (de Jong et al., 2017; Dirks & de Jong, 2022; Möllering, 2019).

1.3.2 Trust Development Trajectories

This study provides a significant advance in the understanding of trust by examining in detail, for the first time, the stability and change in dyadic-level trust in established interpersonal work relationships in an organisational field setting. Trust development in the early stages of relationships is well theorised (e.g., McKnight et al., 1998; Meyerson et al., 1996), but the theoretical understanding of ongoing maintenance in mature relationships is less defined. Trust theory recognises that mature levels of trust can fluctuate depending on the quality of social exchanges and relationship experiences (Rousseau at al., 1998). However, the timing of trust stability, and reasons for individual differences in levels of stable trust, are less understood (Korsgaard et al., 2018; van der Werff et al., 2019a). Likewise, empirical longitudinal trust research tends to focus on new relationships (e.g., Dirks et al., 2021; van der Werff & Buckley, 2017). Furthermore, very few studies examine trust both dyadically and longitudinally, and those that do tend to use experimental designs (e.g., Alarcon et al., 2018; Ferrin et al., 2008) or student samples (e.g., Jones & Shah, 2016; Methot & Cole, 2021). The examination of dyadic trust in an organisational setting involving mature relationships can extend our understanding of trust to include a longer relationship life cycle in a real-life work setting.

In contrast to much empirical dyadic longitudinal trust research which employ time-lagged designs to examine between-subject influences (e.g., Ferrin et al., 2008; Halbesleben & Wheeler, 2015), this study employs latent growth modelling techniques to examine within-dyad changes in trust over time. The aim is to provide insights into individual (dyadic) trajectories of trust, an area that is of increasing interest to trust researchers (Dirks & de Jong, 2022; Fulmer & Dirks, 2018). Furthermore, this study endeavours to explain why different dyads experience different patterns of stability and change in their levels of reliance-based trust and disclosure-based trust. As trust theory proposes that trust increases over time as relationships mature (Lewicki & Bunker, 1996), this study contributes to the debate regarding the factors that influence trust development. In particular, it examines the impact of relationship duration (a proxy for relationship maturity) and communication frequency (a proxy for depth of knowledge of one another) on trust development patterns. In this way, this study seeks to provide a deeper understanding of both stability and change in different forms of trust within established relationships.

1.3.3   Trust Congruence and Incongruence

This study contributes to the debate regarding levels of trust congruence or incongruence within established relationships. Early theorists proposed that trust reaches similar levels between both parties in mature relationships (e.g., Deutsch, 1958; Zand, 1972). Most trust theories imply that a shared context leads to mutual levels of trust, but it has been pointed out that academic literature in this area lacks theoretical and methodological precision (Korsgaard et al., 2015). Other theorists suggest that trust in mature relationships can be characterised by a range of incongruence levels between the two parties, depending on the context (Brower et al., 2000; Schoorman at al., 2007; Tomlinson et al., 2009). Trust incongruence is generally considered to have a negative impact on the benefits of trust within

relationships. The need for a greater understanding of the levels of trust incongruence that exist, and of the antecedents and consequences of trust incongruence, have been highlighted by trust researchers (Korsgaard & Bliese, 2021).

This study proposes that levels of trust incongruence will be found within established work relationships and considers their impact on helping behaviours between the two parties. In doing so, this study aims to show how unbalanced forms of trust (reliance and disclosure) can illustrate different levels of dependence between two parties, and how this imbalance impacts the joint outcomes of the dyad. By doing so, this study aims to add to the academic knowledge regarding the occurrence of trust dispersion with a dyadic workplace relationship and the impact of that dispersion on the benefits that trust brings to the relationship.

1.3.4 Trust and Work Relationships

The final contribution of this research is the work setting of this study, which contributes to our understanding of trust in different contexts, and to our theoretical understanding of work relationships. Trust processes can apply universally but trust itself can differ across contexts depending on situational factors (Colquitt et al., 2011; Dietz, 2011). Trust theory acknowledges the relational context of trust, and that interdependence is a necessary condition for trust (Rousseau et al., 1998; Sheppard & Sherman, 1998). The context of this study, which is relationships between top management team members in small and medium-sized enterprises, allows the examination of trust in established work relationships with different levels of interdependence and risk (Li, 2012, 2013).

From a theoretical viewpoint, in addition to social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960), this study uses interdependence theory (Kelley & Thibaut, 1978; Van Lange & Balliet, 2015) as a central organising principle to study various aspects of dyadic trust. Interdependence theory focuses more on ongoing relationships than

on the transactional exchange focus of social exchange theory (Cropanzano & Mitchell, 2005; Cropanzano et al., 2017). It emphasises the psychological dynamics of interdependence, and how the characteristics of two people interact in a given situation and influence the outcomes of both parties. Interdependence theory provides a framework for analysing relationships and organises relational dynamics within four key principles of interdependence (structure, process, interaction, adaptation). Taking a dyadic approach and applying interdependence theory contributes to the extension of trust theory beyond unilateral trustor centric approaches and ensures that the relational context of trust is fully understood.

1.4   Research Questions and Hypotheses

The objective of this study is to provide a dyadic perspective on the process of interpersonal trust and its development over time. In order to do this, the study seeks to examine both parties in established workplace relationships and address three research questions which are essential to furthering the understanding of dyadic trust. First, what are the reciprocal patterns of influence between two parties in a trusting relationship? Second, what is the trajectory of trust within a relationship over time? Third, what is the impact of trust incongruence within a relationship? Drawing on literature from the fields of trust and workplace relationships, this study proposes four hypotheses which are presented in Table 1.1 below.

Hypothesis 1 (H1) and hypothesis 2 (H2) are developed based on trust theory (Ferrin et al., 2007) and previous empirical research (Yakovleva et al., 2010) in relation to reciprocal patterns of influence between two parties. The research model for H1 and H2 is shown in Figure 1.1 Hypothesis 3 (H3) examines the trajectory of trust change over time (Korsgaard et al., 2018). The research model for H3 is shown in Figure 1.2. Hypothesis 4 (H4) examines

the negative impact of trust incongruence within a dyad (Tomlinson et al., 2009). The research model for H4 is shown in Figure 1.3.

Table 1.1

Research Questions and Hypotheses

RQ1 What are the reciprocal patterns of influence between two parties in a trusting relationship?	Hypothesis 1 An actor's perception of a partner's trustworthiness (ability, benevolence, integrity) influences both actor and partner trust intentions (reliance, disclosure). Hypothesis 2 An actor's trust intentions (reliance, disclosure) towards a partner influence both actor and partner perceptions of interpersonal citizenship behaviour received (task-focused ICB and person-focused ICB).
RQ2 What is the trajectory of trust within a relationship over time?	Hypothesis 3 Changes in trust intentions (reliance and disclosure) are influenced by initial starting levels of trust, length of the dyadic relationship, and communication frequency within the dyad.
RQ3 What is the impact of trust incongruence within a relationship?	Hypothesis 4 The level and incongruence of dyadic trust intentions interact such that the positive relationship of trust (reliance and disclosure) with interpersonal citizenship behaviours (task-focused ICB and person-focused ICB) is stronger at lower levels of trust incongruence than at higher levels of trust incongruence.

Figure 1.1

Research Model for Reciprocal Patterns of Influence
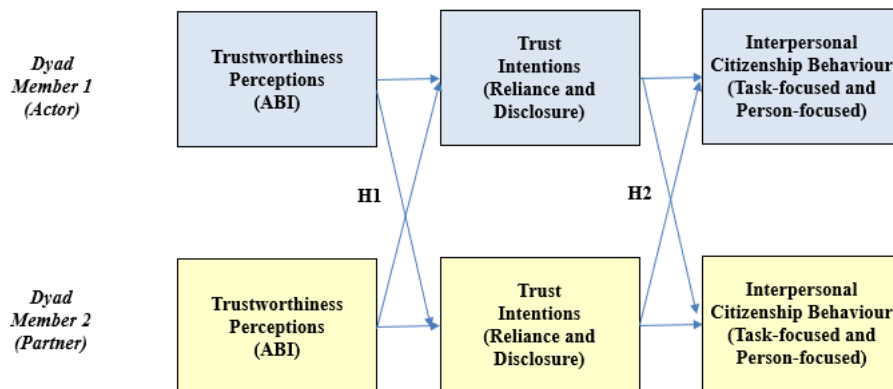
Figure 1.2

Research Model for Trust Change over Time
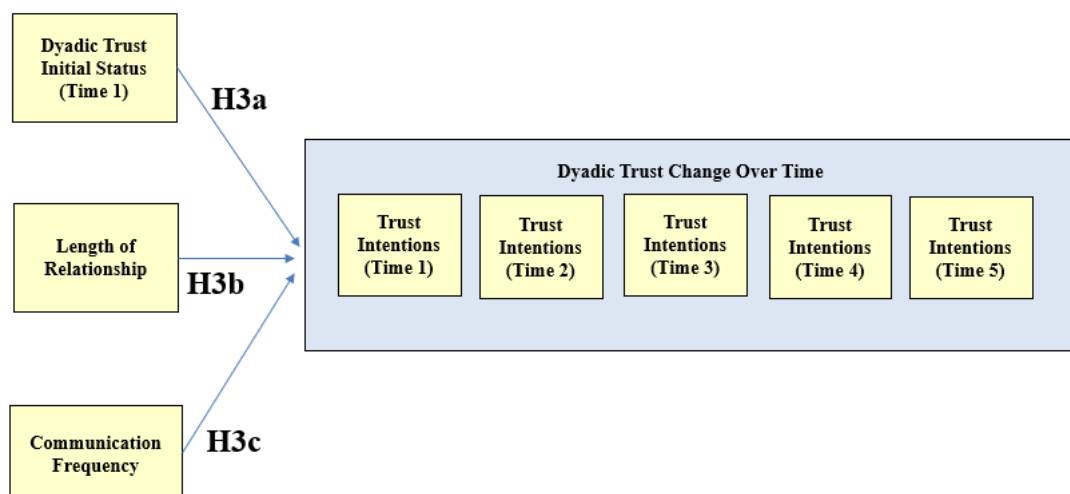
Figure 1.3

Research Model for Impact of Trust Incongruence
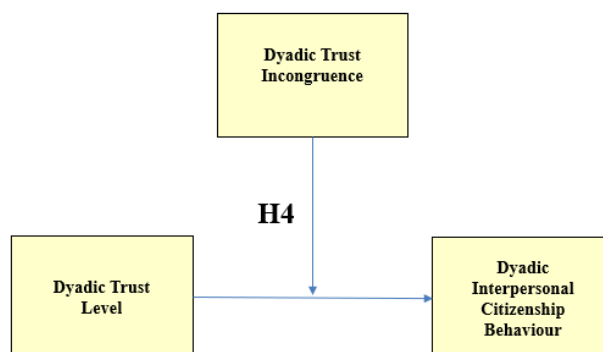
1.5 Thesis Structure and Outline

This thesis contains seven chapters. Chapter 2 reviews theories of workplace relationships and describes the organisational context in which the research was conducted which was top management team coworkers in small and medium-sized enterprises. Chapter 3 describes the key components of individual-level (single-sided or unilateral) trust which are the building blocks of dyadic trust. The academic literature is reviewed in order to provide a basis for subsequent discussion of dyadic-level (two-sided or bilateral) trust. Chapter 4 becomes more specifically focused on dyadic trust and reviews what is currently known in the academic literature about the trust of both parties in a relationship. This chapter includes systematic reviews of the empirical research that has been conducted on dyadic trust and also on longitudinal trust. Hypotheses are developed and presented in three key areas: reciprocal patterns of influence between the two parties; the trajectory of trust over time; and the impact of trust incongruence within the dyad. Chapter 5 details the methodological approach to the study, including the research design and implementation, the sample characteristics, and the data analysis strategy. Chapter 6 presents the results of the data analysis and hypothesis testing including the measurement model and structural models. Chapter 7 discusses the research findings and contributions, the practical implications of the research, limitations, and future research directions.

1.6 Chapter Summary

This introductory chapter presented an overview of this research dissertation and introduced the background and context of the research study. It identified the significance of the research and the importance of interpersonal trust in an organisational setting. It subsequently described the aims and objectives of the study and how these contribute to furthering the theoretical understanding of trust and its application in an organisational

context. The research questions addressed by the study and the specific hypotheses proposed were then provided. The chapter concluded with an outline of the structure of the thesis in order to assist further reading of this dissertation.

The ultimate purpose of interpersonal trust research is to understand what makes people work together collaboratively, and to highlight the benefits that trust brings to both individuals and to organisations. The objective of this research dissertation is to address some of the shortcomings in the current understanding of interpersonal trust in the workplace by carrying out an in-depth study of dyadic trust over time in mature relationships. It also aims to provide a practical contribution to organisations and individuals who wish to exploit the benefits of trust and gain a deeper understanding of the factors contributing to ongoing trust development and maintenance.

2.   Work Relationships - The Research Context

2.1   Introduction

Many human experiences are fundamentally interpersonal. Individual cognitive and affective experiences are profoundly shaped by the social context and by relations with close others. While the focus of this research is trust development patterns in dyadic work relationships, the aim of this chapter is to first provide an overview of the literature on work relationships as the research context. In addition, it aims to illustrate the application of this context to the empirical setting of this field study, which is coworkers in top management teams (TMTs) in small and medium-sized enterprises (SMEs).

The importance of contextualisation in contemporary organisational behaviour research has been highlighted (Johns, 2006; 2017; 2018; Rousseau & Fried, 2001). Situational opportunities and constraints have the potential to shape the meaning underlying organisational behaviour, and researchers have been encouraged to incorporate a better appreciation of context into their organisational behaviour research (Johns, 2006). Increased diversity in contemporary organisational settings and cultural perspectives means that an appropriate understanding of context is needed to bring greater accuracy to models and to enable more robust interpretation of results (Rousseau & Fried, 2001). A contextual approach enables the recognition of what is distinctive or unique about situations, while also enabling the integration and consolidation of apparently disparate phenomena (Johns, 2017; 2018).

Work relationships form the very foundation of organisations, and as contextual background, they frame and influence organisational phenomena (Ferris et al., 2009). Work relationships are, in turn, influenced by the broader organisational context (Heaphy et al., 2018). Flatter organisational structures and increased team-based work emphasise the increasing importance of coworker interactions (Chiaburu & Harrison, 2008; Grant &

Parker, 2009). The crucial need to consider context for the advancement of trust research has also been highlighted, covering situations of varying uncertainty, vulnerability, risk, and interdependence (Li, 2012). While trust processes can be considered to have universal application, actual trust decisions and trust behaviours depend on many situational factors including organisational types, roles, and cultural norms (Dietz, 2011). The context of entrepreneurship has been highlighted as a fruitful area for trust research, given the conditions of uncertainty common to both entrepreneurship and to trust (Li, 2013).

This chapter begins by discussing the nature of work relationships and their importance in organisational behaviour research. Two key theories of work relationships (social exchange theory and interdependence theory) and empirical research in this area are then described. The characteristics and dynamics of work relationships in the context of top management teams in small and medium-sized enterprises are also examined.

2.2   The Nature of Work Relationships

The importance of interpersonal relationships in all aspects of life has long been recognised by relationship science scholars (e.g., Reis et al., 2000). The essence of all types of relationships is "the oscillating rhythm of influence observed in the interactions of two people" (Berscheid, 1999, p. 261), with interaction patterns developing over time. A pervasive concept that characterises most definitions of dyadic close relationships is the dependence one partner has on the other to achieve important needs and goals (Finkel & Simpson, 2015). Close relationships can further be understood by three characteristics: uniqueness; integration; and trajectory (Finkel et al., 2017). The uniqueness principle refers to the concept that a relationship becomes more than the sum of its parts, arising from not only the specific qualities of each partner, but also on the unique patterns that emerge when the partners' qualities intersect. The integration principle demonstrates that interdependence

can facilitate cognitive, affective, motivational, or behavioural merging of two partners into a single psychological entity. The trajectory principle indicates that relationships change over time, and that long-term relationship dynamics are affected by each partner's continually updated perceptions of the relationship experience.

The centrality of relationships has also been recognised in organisational behaviour research which examines how work relationships form and develop over time, the reciprocity inherent in them, the effects they may have, and how they are shaped by contemporary work contexts and settings (Heaphy et al., 2018; Liden et al., 2016). Work relationships have been defined as "patterns of exchanges between two interacting members or partners, whether individuals, groups, or organizations, typically directed at the accomplishment of some common objectives or goals" (Ferris et al., 2009, p. 1379). Work relationships share many common characteristics with non-work relationships, but the organisational setting brings unique aspects to workplace interactions. Organisational relationships are characterised by formal roles, involuntary constraints, exchange norms and instrumental goals, whereas non-work relationships are generally characterised by informality, voluntariness, communal norms, and socio-emotional goals (Pillemer & Rothbard, 2018). Notwithstanding this uniqueness, work and personal relationships can often coincide in the form of multiplex business friendships (Ingram & Zou, 2008). Furthermore, relationships in work and personal lives can be intertwined, each with the capacity to affect the other (Blustein, 2011).

Types of work relationships include leader-follower, coworker-coworker, mentor-protégé, and so forth (Liden et al., 2016). In the large body of leadership research, a relationship-based perspective is increasingly common (Martin et al., 2019; Thomas et al., 2013). Leadership in organisations has long been treated as a dyadic relational construct, and one of the most influential approaches to understanding organisational leadership is leader–member exchange theory (Liden et al., 2016). Coworker relationships have received less attention in workplace relationship research, but they have been identified as a critical

element of contemporary work and shown to influence individual employee attitudes and outcomes (Chiaburu & Harrison, 2008; Sherony & Green, 2002). The characteristics and benefits of mentoring relationships have also been explored, although most commonly from a mentor or protégé viewpoint, rather than a relational perspective (Eby & Robertson, 2020).

Organisational behaviour studies have highlighted both positive and negative benefits of workplace relationships for individuals and organisations. Positive work relationships can be considered as high-quality connections that are mutually beneficial to both parties (Ragins & Dutton, 2007). Work relationships serve a broad range of functions (Colbert et al., 2016), including both instrumental support (such as task assistance, career advancement and emotional support), and individual satisfaction and flourishing (through personal growth, friendship, and the opportunity to give to others). Rather than simply instrumental exchange, positive work relationships can be goals in their own right, driven by a need for human connection and social support (e.g., Gersick et al., 2000). In contrast, although workplace relationships are a vital "life giving" aspect of social and organisation life, they can also have negative impacts and be "life depleting" (Dutton & Heaphy, 2003, p. 263). Rather than offering support, negative relationships are characterised by antagonism, ranging from low severity (e.g., unhelpfulness, incivility, social undermining) to high severity (e.g., conflict, aggression), and are dysfunctional rather than beneficial to the relationship partners (Chiaburu & Harrison, 2008).

However, work relationships are often more complex than either positive or negative and can be ambivalent, having both positive and negative aspects simultaneously (Methot et al., 2017). For example, self-disclosure is thought to contribute to relationship development in the workplace but can have positive or negative effects depending on the context (Gibson, 2018). Mutual self-disclosure can deepen workplace relationships but can also lead to distraction from instrumental goals, emotional depletion, and interpersonal distance if it emphasises dissimilarity between the relationship partners (Pillemer & Rothbard, 2018). In

practice, workplace relationships have been shown to contribute to individual performance through trust, but the effort involved in relationship maintenance also has the potential to deplete personal resources (Methot et al., 2016). Positive relationships meet individual needs and create a beneficial form of relational attachment to the workplace, but individuals have boundaries and differ in respect of the amount of attachment and closeness they desire (Ehrhardt & Ragins, 2019).

Understanding organisational behaviour from a relational perspective is critical for extending the field of knowledge and for providing actionable guidance on how to nurture positive workplace relationships in order to maximise the benefits for individuals and organisations. This corresponds to a broader call in the social sciences to understand phenomena as relational rather than independent (Berscheid, 1999). While organisational behaviour is undoubtedly influenced at the team, leadership, and organisational level, much organisational functioning takes place within pervasive dyadic interactions occurring at all levels of the organisation (Liden et al., 2016). In reality, "the dyad is arguably the fundamental unit of interpersonal interaction and interpersonal relations" (Kenny et al., 2006, p. 1). The focus of this research is dyadic entities, that is, the relationships between two individuals in the workplace.

The next section gives an overview of the major theories in relationship science, with an emphasis on those deriving from social and organisational psychology. It aims to identify the core principles for understanding the characteristics and dynamics of positive workplace relationships in which trust is an essential component.

2.3   Theories of Work Relationships

While work relationships have long been one of the central themes in organisational behaviour studies, theories and research have developed is a somewhat fragmented manner

across many different research disciplines. Berscheid (1999) drew attention to the emergence of relationship science, emphasising the need for a multidisciplinary understanding of the impact of interpersonal relationship dynamics on individual cognition and affect, rather than studying individual phenomena in isolation. A number of calls have been made to integrate theories and bring more emphasis to work relationships in order to focus scholarly attention on the dynamics that occur between two entities, rather than on the properties of the entities themselves (Dutton & Ragins, 2007; Ferris et al., 2009). Relationship science does not at present have a single, unified theory of relationships (Finkel et al., 2017).

In order to provide insight into the psychology of workplace relationships, two established theories of close relationships (social exchange theory and interdependence theory) have been chosen for analysis, drawing from the organisational behaviour and management literatures as well as social psychology and the broader relationship science field. These theories were selected based on their dominance in one or more of these domains, their strong relational focus, and their relevance to the workplace and to close trust-based work relationships. Each of these theories will be described below and discussed in relation to the current research context.

2.3.1   Social Exchange Theory

Social exchange theory is one of the most widely used conceptual frameworks to explain work relationship dynamics and outcomes (Cropanzano et al., 2017; Cropanzano & Mitchell, 2005). While it has origins in anthropology, sociology, and economics, it has become widely used in the fields of management (Colquitt & Zapata-Phelan, 2007) and organisational psychology (Colquitt et al., 2014). Contemporary social exchange theory is not a single theory, but a family of conceptual models based on the foundational works of Homans, Gouldner, Blau, and Emerson, among others (Cropanzano & Mitchell, 2005;

Emerson, 1976). While differing at a detail level, most theorists agree that social exchange involves a series of interpersonal interactions between two people that generate obligations and interdependence, creating the potential to evolve over time into lasting high-quality relationships.

In the first coining of the term social exchange, Homans (1958) explained interpersonal behaviour as an exchange or transfer of goods (material and non-material, such as symbols of approval or prestige) between two individuals motivated to maximise rewards and minimise costs compared to others in a group. Taking a sociological perspective, the focus of this theory was to explain how enduring social structures arise from the actions of individuals. This conceptualisation of social exchange integrated theories of economic science and psychology. Strongly influenced by the dominant behavioural psychology tradition of the time, the psychological bases within this theory of social exchange were restricted to operant conditioning, reinforcement and learned behaviour, placing little emphasis on mental states. Furthermore, it took a top-down reductionist perspective, moving from knowledge of group-level processes to explanation of individual interactions (Emerson, 1976).

Essential to the concept of social exchange is the norm of reciprocity (Gouldner, 1960) where the giving of a benefit by one party creates an obligation in the receiving party to respond in kind, which drives a cycle of mutual exchanges and allows the relationship to develop. This theory proposes the norm of reciprocity as one of the principal components universally present in all value systems and moral codes, an "all-purpose moral cement" (Gouldner, 1960, p. 175). Motivation to reciprocate can be conceptualised as an internalised moral norm, a mechanism that regulates reciprocity as an exchange pattern, regardless of any power or status differentials between individuals. It discourages exploitation from unequal exchanges and contributes to a stable social system. Reciprocation is not guaranteed, but failure to reciprocate may result in repercussions such as distrust, damaged reputation,

loss of future benefits, and other sanctions. In addition to the encouragement of mutual positive exchanges, the negative norm of reciprocity can encourage individuals to respond in a negative exchange pattern. Whether positive or negative, the concept of equivalence applies in the exchange: the things exchanged can be identical or alike (homeomorphic reciprocity, or "tat for tat") or concretely different (heteromorphic reciprocity, or "tit for tat"), but they should be equal in value, as perceived by the two exchange partners. While this theory suggests that extremes of either identical reciprocity or instances of no reciprocity at all are rare, perfect equivalence is thought to be less common than some amount of unequal exchange in practice. In addition, obligations of reciprocity can only apply where the individual has the ability to reciprocate.

Peter Blau (1964) was one of first theorists to differentiate between economic exchange, consisting of well defined, explicit obligations, and social exchange, consisting of unspecified obligations and more discretionary responsibilities. As the nature of the obligation or exchange is unspecified, it cannot be negotiated, guaranteed, or controlled. In this conceptualisation, social exchange takes time to develop, as repeated voluntary exchanges are needed to contribute to the growth of obligation, gratitude, and trust, which are necessary for social exchange but not essential for the more specified economic exchange. A level of imbalance between exchanges can exist at any given time, passing from partner to partner, which signals a willingness to remain indebted for a length of time, positive expectation of future reciprocity, and a long-term relationship orientation. This theory was the first to explicitly identify trust and trustworthiness as essential elements of social exchange, ''since there is no way to assure an appropriate return for a favor, social exchange requires trusting others to discharge their obligations'' (Blau, 1964, p. 94), and ''since social exchange requires trusting others to reciprocate, the initial problem is to prove oneself trustworthy'' (Blau, 1964, p. 98). However, while Blau acknowledged the psychological aspects of social exchange, this theory placed more emphasis on economic

analysis and provided less detail on the psychological components of the exchange process (Emerson, 1976).

Moving beyond the behavioural reinforcement perspective of Homans and the rational choice perspective of Blau, an affective theory of social exchange (Lawler, 2001; Lawler & Thye, 1999) can explain how motivation to continue positive emotions (or avoid negative emotions) produced by the exchange process influences subsequent exchanges and generates stronger (or weaker) ties to the relationship over time. In a similar vein, Ballinger and Rockman (2010) propose that emotion and memory associated with important exchanges (anchoring events) are critical to the ongoing exchange process. These anchoring events, marked by extreme emotions, can change the relationship rules from reciprocity to nonreciprocity suddenly (via a "chute") or gradually (via a "ladder"). This "punctuated-equilibrium" can explain nonreciprocal exchanges such as those based on altruism, competition, and revenge. Asymmetric relationships can endure over time in a nonreciprocal state because of the strength of memory of the initial affective response.

Social exchange theory has been operationalised using a wide variety of indicators to capture the linkage between some benefit (such as justice) and some reciprocating behaviour (such as citizenship). These exchange indicators include: fairness perceptions (Colquitt et al., 2013; Rupp et al., 2014); perceived organisational support (Kurtessis et al., 2017; Rhoades & Eisenberger, 2002); psychological contract fulfilment (Bal et al., 2008; Coyle-Shapiro et al., 2019; Zhao et al., 2007); and trust (Coyle-Shapiro & Diehl, 2018; Nienaber et al., 2015b). Organisational citizenship behaviour and motivation to be a "good soldier" (Organ, 1988) was one of the first phenomena to be considered from the perspective of social exchange theory. It has since been examined extensively as an outcome of social exchange relationships (Ilies et al., 2007), at both the organisational level (e.g., Konovsky & Pugh, 1994) and the dyadic level (e.g., Settoon & Mossholder, 2002). As well as explaining

positive exchange patterns evident in most employees, social exchange theory has also been used to explain negative workplace behaviours (see meta-analysis from Greco et al., 2019).

Despite the popularity of social exchange theory in management and organisational psychology fields, it has been criticised for conceptual ambiguity and lack of sufficient theoretical precision (Cropanzano & Mitchell, 2005). As an extremely broad conceptual framework, it can be applied to almost any pattern of social behaviour, but several issues have been identified (Cropanzano et al., 2017). First, the lack of detail in social exchange theory has led to the development of a myriad of constructs that often conceptually and empirically overlap. The wide range of exchange indicators has been interpreted as a lack of consensus about how to measure social exchange relationships, and many of the scales used have been criticised for not capturing the relational and reciprocal essence of social exchange (Bernerth et al., 2007; Colquitt et al., 2014). In contrast, scales which emphasise the original characteristics described by Blau (1964) such as mutual obligation, mutual trust, mutual commitment, and mutual significance have been shown to be the most content-valid indicators of social exchange (Colquitt at al., 2014).

Second, many of the constructs operationalised within a social exchange framework have been conceptualised as exclusively positive (e.g., organisational citizenship behaviour) or exclusively negative (e.g., counterproductive work behaviour), which can be over simplistic (Cropanzano et al., 2017). The possibility of dual positive and negative behaviour, as opposed to a single continuum from positive to negative, has been highlighted. Many constructs have both positive and negative manifestations, which tend to be negatively correlated to some degree but remain distinguishable from one another, where the absence of a positive construct does not necessarily imply the presence of a negative construct (e.g., justice and injustice, trust and distrust). In addition, the evaluation of positive or negative valence can vary depending on the viewpoint taken (e.g., what a supervisor might classify as undesirable counterproductive work behaviour could be the best response from an

employee self-interest perspective). Similar to the need to recognise the complex and ambivalent nature of relationships (Methot et al., 2017), social exchange research should attempt to capture the perspectives of all the exchange participants as well as the complexities of dual behaviours (Cropanzano et al., 2017).

Third, it has been pointed out that much social exchange theory emphasises transactions rather than relationships (Cropanzano & Mitchell, 2005). Furthermore, social exchange theory does not adequately distinguish between initiating actions and relational and behavioural reciprocating responses (Cropanzano et al., 2017). An exception is the work of Clark and Mills (1979, 1993), which emphasised social exchange relationships, distinguishing between exchange relationships involving economic exchanges that are motivated by personal self-interest, and communal relationships involving socioemotional exchanges, motivated by responding to the needs of the other party. While exchange relationships could be considered more applicable to a business context, and communal relationships more applicable to a family or friendship context, the distinction is not explicit, as one can develop into or coexist with the other (e.g., Methot at al., 2016).

Despite the issues and gaps in social exchange theory, it remains a useful and popular theoretical framework to examine workplace relationship dynamics. However, it has been suggested that organisational behaviour literature is over-reliant on social exchange theory (e.g., trust literature, Nienaber et al., 2015b), and that other theories should be considered which may address some of its limitations. Interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) is a more developed theory that conceptualises interpersonal interactions as social exchange in a similar manner to the theories of Homans and Blau, but in contrast, has a stronger psychological foundation (Emerson, 1976). By developing the psychological bases of social exchange, with a core focus lasting dyadic relationships characterised by interdependence between the parties, interdependence theory has developed

into one of the most influential theories of close relationships (Finkel et al., 2017), and is covered in the next section.

2.3.2   Interdependence Theory

Interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) is recognised as one of the major relationship theories within social psychology (Finkel et al., 2017). Interdependence theory is very broad, incorporating many of the classic theories in social psychology that address how social interactions shape both interpersonal and intrapersonal processes (Van Lange & Balliet, 2015). As one of the oldest relationship theories, with origins in the close relationship literature, interdependence theory was heavily influenced by early social psychology research on group dynamics (Lewin, 1936; 1948), game theory (Luce & Raiffa, 1957) and by social exchange theory (Homans, 1958). Over time it has developed into a comprehensive theory of social interaction (Kelley et al., 1983, 2003; Van Lange & Balliet, 2015), and is recognised as a major overarching theory in relationship science (Finkel & Simpson, 2015). Although not commonly applied in organisational research, it has been proposed as a key theory of context which can explain in a systematic way how the interpersonal context affects social behaviour within organisations (Johns, 2017; 2018). In recent times, attention has been drawn to the potential for interdependence theory to extend understanding of a variety of workplace relationships (e.g., Eby & Robertson, 2020; Thomas et al., 2013).

Interdependence theory suggests that the nature of a relationship between two people, and the interactions they experience, can be explained by the extent of their dependence on one another, and the ways in which the individual characteristics of each relationship partner interact within that social context. Thus, the extent to which one person's outcomes (including their experiences, thoughts, emotions, motives, behaviour) are influenced not

only by themselves but also by another person in a specific context, is at the core of interdependence theory. Interdependence theory recognises actor effects (the effect of party A's attributes on their own outcomes, partner effects (the effect of party B's attributes on party A's outcomes), and joint effects (the interaction of party A and party B attributes on party A's outcomes). Most psychological theories adopt a within-person perspective, whereas interdependence theory offers "an important antidote to this actor-focused bias" (Rusbult & Van Lange, 2008, p. 2049).

Interdependence theory analyses relationships within four primary principles covering structure, transformation, interaction, and adaptation (Kelley & Thibaut, 1978). The first principle of interdependence (structure) refers to the importance of understanding six situational dimensions of the relationship: the degree of dependence; mutuality of dependence; basis of dependence; covariation of interests; temporal structure; and information availability (Kelley et al., 2003; Kelley & Thibaut, 1978). Firstly, the degree of dependence refers to the level of reliance on a relationship partner. The extent to which one partner's outcomes are influenced by the other partner's actions can range from high actor control (where a partner can independently obtain good outcomes irrespective of the other's actions) to partner control (where a partner's outcomes are fully or partially determined by the actions of the other partner). Secondly, mutuality of dependence refers to the degree to which two partners are equally dependent on one another. The theory suggests that relationships with mutual levels of dependence are more stable and less demanding on partners. Nonmutual dependence can lead to different power levels, with the more independent partner having more responsibility and control in the relationship, and the more dependent partner having to make more accommodations and being more vulnerable in the relationship. Thirdly, basis of dependence refers to the ways in which each partner influences the other, ranging from unilateral action to shared coordination, and is influenced by the balance of dependence between the partners. The fourth dimension, covariation of interests,

refs to the degree to which individual partner outcomes correspond or conflict. Interactions leading to good outcomes for both partners are characterised by positive cognitions and emotions, cooperation and trust, whereas interactions with conflicting interests are characterised by negative cognitions and emotions, competition and distrust.

The final two dimensions of situational structure were added to interdependence theory at a later stage (Kelley et al., 2003). The fifth dimension, temporal structure, highlights the changing nature of interaction over time which can unfold somewhat passively as the relationship develops or can be the result of active choices made by each partner. Temporal structure is also a key influence on motivation to cooperate or persist, which is more likely in a long-term high-dependence relationship than in a short-term low-dependence relationship (Van Lange & Balliet, 2015). The final structural dimension refers to the level of information available to each partner in the relationship concerning the motivations and goals of both parties, and the behavioural impact on the outcomes for each party. This can be based on information exchange between partners, or on prior relationship experiences and individual dispositions. These six structural or situational dimensions influence and constrain the behaviour of partners in an interdependent relationship. They can be combined to explain common or prototypical relationships and situations (Kelley et al., 2003).

The second principle of interdependence (transformation) addresses individual affective and cognitive processes, driven by interaction goals. It emphasises the psychological process of transformation, whereby relationship partners consider behavioural choices and consequences for themselves and their partner. Psychological transformation is a form of motivational change or self-regulation, moving from immediate self-interest to concern for a partner's welfare and longer-term relationship goals. The process of transformation is driven by individual cognition and affect, and influenced by the first principle of situation structure, in addition to individual dispositions, values, goals, and prior

experiences. In familiar or low-risk situations, transformation can be habitual and unconscious, whereas in unfamiliar or high-risk situations it can be a more conscious and explicit process. Transformation relies on self-presentation processes, involving the communication by each partner of their goals, values, motives, and dispositions, and attribution processes, involving the interpretation of these signals and an assessment of their implications (Kelley et al., 2003; Kelley & Thibaut, 1978).

The third principle of interdependence (interaction) ascertains that social interaction patterns are a function or consequence of both the situation and the two individual partners within the relationship. In other words, interaction is unique to each relationship arising from the situational context and the individual profile of each party. In interdependence theory, interpersonal orientations are considered to be as meaningful as intrapersonal orientations (Rusbult & van Lange, 2003). Interpersonal preferences include prosocial orientations benefitting others such as altruism and cooperation, and antisocial orientations such as individualism, competition, and aggression, driven by self-interest.

The final principle of interdependence (adaptation) proposes that repeated interactions result in stable patterns within a relationship. Repeated experience in similar situations results in habitual response tendencies. Adaptation arises from a social learning process, with experience promoting longer term orientations in relationships that provide desired outcomes. The theory proposes that adaptation is influenced by individual stable dispositions, individual relationship-specific orientations, and social norms (Rusbult & Van Lange, 2003).

Strengths of interdependence theory include the provision of a taxonomic framework for the analysis of social interactions between two people, the inclusion of the psychological transformation concept which contrasts with models of rational self-interest, and the acknowledgement of the long-term nature of relationships (Rusbult & Van Lange, 2003). However, interdependence theory does not identify an overarching need that drives

behaviour, as it assumes that these are diverse and unique to individuals and situations. It does recognise that some needs and outcomes are pervasive and universally desired (material outcomes) reflecting similarity between people, while others are more particular to individuals (personal outcomes) reflecting dissimilarity between people (Rusbult & Van Lange, 2003; Van Lange and Balliet, 2015). It also acknowledges that reliance on another presents positive or negative "affordances", features of a situation that interact with personal dispositions to motivate behaviour (Gibson, 1977; Holmes, 2002). Affordances include levels of comfort or discomfort with dependence or independence, preferences for leading or following, and levels of self-interest versus prosocial motives.

Other theories have theoretically extended and complemented interdependence theory, bringing more focus on the motivational processes that explain why people actively choose interaction and develop interdependent relationships. For example, the investment model of interdependence (Rusbult, 1980; Rusbult & Buunk, 1993) focusses on commitment within a relationship which is influenced by three key features: relationship satisfaction level, availability of alternatives, and level of investment. Although initially developed in the context of close personal relationships, it was also applied to workplace commitment (Rusbult & Farrell, 1983). The risk regulation model (Murray & Holmes, 2009; Murray et al., 2006) has also been influenced by interdependence theory and advocates trust as the psychological precondition for commitment within a relationship. Central to this theory is the principle of perceived partner responsiveness (Reis, 2007; Reis & Gable, 2015), defined as the belief that relationship partners understand and behaviourally support each other. Perceptions of partner responsiveness is thought to be a precondition for self-disclosure, which can develop close bonds between partners in a mutual and reciprocal process (Laurenceau et al., 1998; Reis & Shaver, 1988).

Although interdependence theory has been used to explain a wide variety of relationship phenomena, few studies directly test the theory. Evidence for the theory's

propositions often draws on research conducted for other purposes (e.g., the prototypical situations covered by Kelley et al., 2003). Furthermore, most empirical research utilising interdependence theory comes from studies of close personal relationships, and its application to organisational research is relatively uncommon at present. The most common aspect of the theory used in empirical studies is the investment model (Rusbult, 1980). Meta-analytic research has found the three features of this model (relationship satisfaction, availability of alternatives, level of investment) to be strong predictors of relationship commitment, although more so in close personal relationships than in job or organisational commitment (Le & Agnew, 2003). Subsequent studies have used the principles of the investment model to understand employee attitudes to organisational change (van Dam, 2005), supervisor incivility (Madlock & Dillow, 2012); and high-quality leader–member exchange relationships (Loignon et al., 2019; Radulovic et al., 2019).

One possible explanation for this lack of empirical application of interdependence theory could be methodological limitations, as statistical techniques for testing aspects of interdependence have been slow to develop. These methods are described in detail in the methodology section of this thesis. One dominant method is the actor-partner interdependence mode (Kenny, 1996; Kenny et al., 2006), which, although not directly based on interdependence theory, has many commonalities and has become synonymous with dyadic analysis in which statistical interdependence is fundamental. As a result of the immaturity of the statistical methods, much research examining aspects of relationship interdependence has utilised a piecemeal approach, testing only some components of interdependence (Wickham & Knee, 2012). Furthermore, the comprehensiveness of interdependence theory brings with it an amount of complexity, and much empirical work utilises sub-theories of relationships rather than interdependence theory itself (Reis & Arriaga, 2015).

The potential of interdependence theory to provide a deeper understanding of trust has been highlighted (Rusbult & Van Lange, 2008). From this perspective, trust is a relationship-specific adaptation based on the responsiveness and concern demonstrated by a partner. Interdependence variables such as commitment, pro-relationship acts, and trust have been found to interact in a model of mutual cyclical growth in which, firstly, dependence promotes commitment to the relationship, which in turn promotes pro-relationship acts, which are subsequently perceived favourably by the partner leading to enhanced trust and fostering further dependence in the relationship (Wieselquist et al., 1999). Interdependence theory has also been used in a meta-analysis by Balliet and Van Lange (2013) to explain the relationships between trust, conflict, and cooperation. Trust can be considered as an interpersonal mechanism or process which can explain how interdependence functions within a relationship and how it influences the behaviours and outcomes of both parties.

The fact that interdependence theory focuses less on the specifics of a situation and instead emphasises the underlying abstract situational structures and processes has been proposed as one the key reasons it has become an overarching model of relationships, integrating and complementing many more specific sub-theories (Rusbult & van Lange, 2003). A unique aspect of interdependence theory is that it addresses how two interacting people influence each other. Interdependence theory has endured, growing in scope and influence, and has become one of social psychology's most comprehensive theories (Reis & Arriaga, 2015). It has been suggested that a more theoretically integrated approach to research in personal relationships could result in interdependence theory becoming the unifying theory of personal relationships (Reis, 2007). Interdependence theory is a very flexible framework for analysing interpersonal interactions and can be combined with other theoretical perspectives.

An application of interdependence theory to the study of trust can provide a superior framework to understand the interactive influence of both parties within a relationship and

can offer a deeper understanding of the situational aspects of the trust process. Trust is fundamentally dyadic, reciprocal, contextual, and dynamic, in that Party A trusts Party B (and vice versa) to do X in a specific situational context, and trust can change over time (Mayer et al., 1995; Rousseau et al., 1998). Interdependence theory provides a comprehensive taxonomic framework that includes the interaction of both parties within a given situation and over time within an ongoing relationship. This framework offers a way to analyse and understand the underlying psychological factors that influence interpersonal interactions and is thus exceedingly suited to the analysis of interpersonal trust dynamics.

2.3.3 Summary of Work Relationship Theories

This section presented two major theories to explain the nature of workplace relationships. These theories were selected based on their dominance in the organisational behaviour and management literature as well as social psychology and the broader relationship science field. They each have deep interpersonal roots and have been shown to be relevant to close trust-based relationships within organisations.

Firstly, drawing from the applied psychology literature, social exchange theory (Blau, 1964; Gouldner, 1960; Homans, 1958) was explored. This is one of the most widely used theories in organisational behaviour research and has been the dominant theory in trust research to date. It focuses on the nature of social exchange transactions. Secondly, drawing from the field of social psychology, interdependence theory (Kelley & Thibaut, 1978) was reviewed. This is a comprehensive theory of social interaction describing the structure, transformation, interaction, and adaptation aspects of relationships.

Several other theoretical perspectives have been influential in relationship science. For example, attachment theory (Ainsworth et al., 1978; Bowlby, 1982) is an influential

theory of personality and relationships, but psychodynamic models are not popular in organisational behaviour studies, where the five-factor trait model of personality is predominant (Harms, 2011). In addition, several major trust reviews did not identify attachment styles as antecedents to trust (Baer & Colquitt, 2018; Colquitt et al., 2007; Dirks & Ferrin, 2002), and it is not used in the current study. The desire for social connections and relationships is considered a basic human need (Baumeister & Leary, 1995), and various evolutionary theories have been used to examine close relationships (Finkel & Simpson, 2015). However, evolutionary psychology is not commonly applied in the organisational behaviour setting. Equally, many more specific mid-level theories can be applied to the examination of relationships, but they can fit within and extend both social exchange theory and interdependence theory.

While there is no single overarching theory of relationships, several common themes have been identified, and social exchange theory and interdependence theory can be considered complementary rather than conflicting (Finkel et al., 2017). Taken together, these theories explain how individuals interact with others, which results in unique patterns of thought, feeling, and behaviours. The dispositions of both partners (such as their traits, motives and needs) and their perceptions about each other influence the dynamics of the overall relationship. Each theoretical perspective offers insight on the dynamics of interpersonal interactions in the context of this research and highlights areas of potential interest for studying the role of trust within dyadic workplace relationships. Together, these theories can extend our understanding of the depth and complexity of relationships in general and of workplace relationships.

That said, a greater integration across theories in relationship science would be desirable (Finkel et al., 2017). While dyadic work relationships are gaining the attention of both organisations and researchers (e.g., Korsgaard et al., 2015), conceptual and methodological challenges have hampered theoretical integration and empirical dyadic

research (e.g., Gooty & Yammarino, 2011; Krasikova & LeBreton, 2012; Tse & Ashkanasy, 2015). Finkel et al. (2017) call for theoretical integration to reduce redundancy and for clearer identification of conflicts across theories to drive relationship science forward. Extending this to the field of organisational psychology, as the field matures an integration of theories should deepen theoretical and practical understanding of workplace relationships and help bring about more fulfilling and effective relationships within organisations. The adoption of interdependence theory in this study, in addition to social exchange theory, also answers the call from trust researchers to integrate theory from other disciplines into trust research (Dirks et al., 2022).

2.4   Work Relationships in Top Management Teams

A team can be defined as "an arrangement of people brought together to accomplish one or more common goals, are interdependent, and function in organizational contexts" (Mathieu et al., 2017, p. 461). In a more extended definition (Kozlowski & Ilgen, 2006, p. 79), a team can be defined as "(a) two or more individuals who (b) socially interact (face-to-face or, increasingly, virtually); (c) possess one or more common goals; (d) are brought together to perform organisationally relevant tasks; (e) exhibit interdependencies with respect to workflow, goals, and outcomes; (f) have different roles and responsibilities; and (g) are together embedded in an encompassing organisational system, with boundaries and linkages to the broader system context and task environment". More particularly, definitions and characteristics of top management teams (TMTs) vary widely (Krause et al., 2022). TMTs have commonly been described as the top tier of an organisation (Chair, CEO, CFO, COO, etc.), but can also include the second tier (senior VPs), the third tier (other VPs), and the board of directors (Certo et al., 2006). While TMT membership is often indicated by title or position, in practice it can include any senior manager who has an influence on

organisational decisions that are strategic in nature (Carpenter et al., 2004; Krause et al., 2022).

Although interactions within top management teams are considered of critical importance, most research conceptualises the TMT as an aggregate entity, and research on the relationships between TMT members is still relatively sparse (Menz, 2012; Krause et al., 2022). The majority of the TMT research literature has been limited to the examinations of TMT composition, especially the relationship between heterogeneity of member demographic attributes and organisation performance, but findings have been mixed or inconsistent (Bell et al., 2011; Carpenter et al., 2004; Certo et al., 2006; Nielson, 2010). The perspective that TMT member characteristics (such as background, experience, personality, and values) are positively and significantly associated with strategic decisions and firm performance is largely based on the theory of upper echelons (Hambrick, 2007; Hambrick & Mason, 1984). This theory argues that strategic leadership is a key function of the TMT as a whole rather than the individual CEO, propelling the team to be the dominant level of analysis in TMT research. Although some leadership research has examined the role of the CEO as an individual leader interacting with the TMT (e.g., Carmeli et al., 2011; Colbert et al., 2014; Lin & Rababah, 2014; Ling et al., 2008), many leadership scholars have argued that traditional, top-down models of leadership are no longer adequate in the context of TMTs, emphasising models of shared leadership (Pearce & Manz, 2005). Similarly, strategic leadership has been defined as "the functions performed by individuals at the top levels of an organization (CEOs, TMT members, Directors, General Managers) that are intended to have strategic consequences for the firm" (Samimi et al., 2022).

Core to upper echelons theory is the concept of behavioural integration, the degree to which a TMT interacts collaboratively, sharing information, resources, and decisions. A small number of studies have shown that behavioural integration is positively associated with organisational performance (e.g., Boone & Hendriks, 2009; Carmeli, 2008; Carmeli &

Schaubroeck, 2006; Carmeli et al., 2011), but empirical research on behavioural integration within TMTs is relatively scarce (Simsek et al., 2005). In fact, practitioners seem to have significantly more insight into TMT behavioural integration patterns than academic researchers (Krause et al., 2022). Challenges with access to TMT members, combined with lack of integration with the broader team literature, have been suggested as reasons why researchers have not gained a good understanding of TMT processes and evidence has been "slow to accumulate" (Barrick et al., 2007, p. 544). While the ease of access to demographic indicators has generated substantial evidence that they are highly related to TMT performance, they do not give a deep understanding of the psychological and social processes that are driving TMT behaviour (Hambrick, 2007). Demographic indicators can be considered as methodologically convenient proxies representing more complex, inaccessible constructs, but have inherent limitations (Carpenter et al., 2004; Priem et al., 1999). Deeper investigation of the "relational black box" of top management teams (Neeley et al., 2020) is required in order to gain a richer understanding of how interpersonal dynamics operate and contribute to successful individual and organisational outcomes.

In contrast to upper echelons theory, the macro-level institutional theory (DiMaggio & Powell, 1983) suggests that TMTs have little differentiating effect because organisations are subject to isomorphic pressures, drawing on the same resource pools which results in increasing similarity among peer organisations over time. However, it has been argued that isomorphic pressure has reduced in recent times, that organisations are increasingly heterogeneous and can be differentiated by an effective TMT which has strong intra-team relationships supported by collaborative behaviours (Hambrick, 2007; Hambrick et al., 2004).

Top management teams are a good source to examine dyadic relationships, as they vary widely in terms of interdependence between members. In some TMTs members are highly interdependent, whereas in others, members operate largely independently (Barrick

et al., 2007; Hambrick et al., 2015). Within some TMTs, older and more experienced members can be more involved in decision-making, acting as "counselors" (Eisenhardt,1989). TMTs can consist of a "stable core group" combined with a "dynamic periphery", where some members interact more frequently and are more involved in strategic decision making, although this can vary depending on the decision subject matter (Roberto, 2003).

Interdependence in the team literature has been conceptualised in a variety of ways. A recent meta-analysis (Courtright et al., 2015) has identified two broad forms of structural interdependence within teams: task interdependence, the degree to which task work is designed so that members depend upon one another for access to critical resources and create workflows that require coordinated action; and outcome interdependence, which refers to the degree to which the outcomes of task work are measured, rewarded, and communicated at the group level so as to emphasise collective outputs rather than individual contributions. In a TMT context, Hambrick et al. (2015) identified three facets of structural interdependence: horizontal interdependence (the degree to which members' tasks and responsibilities bear on each other); vertical interdependence (the degree to which members are hierarchical peers, recognising that some TMTs include individuals of varying ranks); and reward interdependence (the degree to which members receive payoffs for collective accomplishment).

In the broader team literature, interdependence has been found to positively relate to performance, evidenced by several meta-analyses. Task interdependence primarily impacts team performance through task-focused team functioning involving transition/action processes and collective efficacy, whereas outcome interdependence primarily influences team performance through relationship-focused team functioning involving interpersonal processes and cohesion (Courtright et al., 2015). Interdependence has also been identified as a significant moderator of key relationships between team performance and a number of

team constructs such as team efficacy (Gully et al., 2002), team cohesion (Beal et al., 2003), teamwork processes (LePine et al., 2008), team cognition (DeChurch & Mesmer-Magnus, 2010) and intra-team trust (de Jong et al., 2016). Goal interdependence and team cohesion have been found to relate positively to team innovation (Hülsheger et al., 2009).

Similarly, in the TMT literature, structural interdependence between TMT members has been linked to higher firm performance, indicating that TMT members who interact extensively with each other and have joint outcomes achieve optimal firm performance (Barrick et al., 2007). However, while the most effective TMT relationships are highly interdependent, low interdependence between members can also be effective in certain contexts, depending on the amount of commonality in tasks, goals, and rewards (Barrick et al., 2007). Structural interdependence has been found to moderate the positive relationship between TMT tenure heterogeneity and TMT turnover as well as firm performance (Hambrick et al., 2015). In other words, diversity in TMT tenure is positively associated with both TMT departures (as a result of dislike, distrust, etc.) and with high firm performance (as a result of diversity driving increased innovation), even more so in both cases when structural interdependence is higher. The general theme in the TMT literature is that interdependence between team members is critical to the success of the firm.

In contrast to structural interdependence, the conceptualisation of interdependence as a psychological phenomenon (similar to that of Thibaut and Kelley discussed in a previous section) is rare in the TMT literature. Studies of intra-TMT interactions have generally focussed on collective team processes such as communication and conflict (Bromiley & Rau, 2016), and on team emergent states such as group potency (e.g., Clark & Maggitti, 2012), team cohesion (e.g., Ensley et al., 2002), and team resilience (e.g., Carmeli et al., 2013).

A small number of TMT studies have taken a relational perspective and highlighted trust as an important emergent state in TMTs that are characterised by high levels of interdependence between members. Trust within TMTs has been shown to enable learning

from failures, leading to higher strategic decision quality (Carmeli et al., 2013). Relational behaviours including collaboration, information sharing, and displays of mutual respect foster a climate of psychological safety (a concept closely related to trust) which is necessary for learning. CEO relational leadership nurtures trust among TMT members, cultivating an environment of reciprocity, and increases the probability that members will engage in and form quality relationships among themselves. Intragroup trust within TMTs has been found to improve the positive affect of TMT cognitive diversity and task conflict on strategic decision making (Olson et al., 2007). Furthermore, TMT trust has been shown to prevent task (cognitive) conflict from escalating into relationship (affective) conflict (Simons & Peterson, 2000). This is an important outcome of trust between TMT members, because while cognitive conflict has been found to be associated with good decision making, TMT affective conflict has been associated with poor decision making (Amason, 1996; De Wit et al., 2012).

A recent review of team effectiveness research has called for the increased consideration of the dynamic features of teams, including the exploration of how emergent states (such as trust) form and develop over time (Mathieu et al., 2019; Mathieu et al., 2017). Team emergent states unfold across levels (individual to dyadic to team) over time (Kozlowski & Ilgen, 2006). While researchers are increasingly examining work teams using a social network perspective, it is recognised that dyadic relations are the building blocks of team interactions (Park et al., 2020). Humphrey and Aime (2014) argue for an increased emphasis on microdynamics in team research, suggesting that the predominantly static and collectivist approach to team research does not adequately consider the essentially relational and dynamic nature of teams. A multilevel, multi-theoretical, and multiperiod framework (such as that provided in the current study) may provide new insights into workplace behaviours.

2.5 Work Relationships in Small and Medium-sized Enterprises

TMT research has been conducted mainly on large firms, which has led to a limited understanding about TMT processes in smaller organisational settings. Small and medium-sized enterprises (SMEs) are typically classified as privately held firms with no more than 250 employees (OECD, 2023). While TMT processes in larger firms can be additionally influenced by more complex organisational systems and governance mechanisms, TMTs in SMEs can provide a less complicated setting for the examination of interpersonal dynamics. Similar to the role of TMTs in larger firms, the importance of TMT behavioural integration in an SME context has been demonstrated (Simsek et al., 2005). The influence of behavioural integration on SME TMT behaviours such as ambidexterity (exploration of new opportunities as well as exploitation of existing competencies) and its impact on firm performance have also been supported (Lubatkin et al., 2006). In addition, external prestige perceptions have been found to be positively associated with TMT collective identification and behavioural integration in SMEs (Carmeli & Shteigman, 2010).

Entrepreneurship research can be a valuable source of evidence on SME dynamics, where, similar to the general strategic management literature, the trend has moved from studying individual entrepreneurs to team-based entrepreneurship (new venture teams) and shared leadership. Even more than SMEs, new venture TMTs offer great potential to examine the development of interpersonal dynamics, as they can be less constrained by organisational influences, have less established social norms, and have high levels of managerial discretion and wide latitudes of action (Ensley et al., 2006). However, most entrepreneurship research on TMTs has followed the lead of upper echelons research and has been overly dependent on publicly available demographic data to measure differences in the characteristics and composition of new venture teams (Klotz et al., 2014). Some progress has been made, particularly in the areas of team conflict, team cohesion, and shared cognition (e.g., Ensley & Pearce, 2001; Ensley et al., 2002). However, while the new venture

team literature has progressed in understanding collective cognitions, affective emergent states (such as trust) in new venture TMTs remain understudied (Klotz et al., 2014). Difficulties with access to TMTs in both established SMEs and new venture firms is undoubtedly a constraining factor for researchers, but in consequence most research to date is subject to the same limitations as the broader TMT literature (Priem et al., 1999).

Understanding the role of trust in TMT work relationships is valuable to both established SMEs and entrepreneurial new venture firms who would like to foster trust as a way of bringing about behavioural integration, cooperation, information sharing, and joint decision making amongst TMT members. The trustworthiness signals displayed by entrepreneurs have been connected with the level of investment they receive (Maxwell & Lévesque, 2014), but interpersonal trust processes within new venture TMTs is less understood. Entrepreneurship contexts present a promising area for trust research, as both concepts share a common theme of uncertainty and ambiguity (Li, 2013).

Finally, there are also important practical reasons to study SME top management teams. SMEs are a vital component of most economies, driving job creation and economic growth. Across the European Union there are 25 million SMEs providing 95 million jobs, accounting for 99.8% of all business enterprises, and providing 66% of all jobs in the non-financial business economy (European Commission, 2019a, p. 8). In Ireland, the setting for this research, SMEs play a particularly important role in terms of employment, where 263,000 SMEs provide over 1 million jobs, accounting for 70% of all jobs in the non-financial business economy (European Commission, 2019b, p. 2). Despite their importance, SMEs tend to be overlooked by management scholars because they are so difficult to access. Research on SME top management team relationships will contribute to reducing the significant gap in understanding of this important sector.

2.6   Chapter summary

This chapter provided a discussion of work relationships as the context of this research. In particular, the core concept of reciprocity at the heart of relationships was highlighted, and attention was drawn to interpersonal trust as a key influence in relationship development and maintenance. The chapter presented two dominant theories of work relationships (social exchange theory and interdependence theory) which aim to describe and explain the dynamics and outcomes of interpersonal interactions in the workplace. In addition, empirical evidence from existing work relationship literature was explored. Finally, the application of relationship theory to the current research sample, which is top management teams in small and medium-sized enterprises, was examined, along with empirical research in these settings. This chapter provides an insight into the setting of the current research with the aim of contextualising the theoretical contributions to the trust literature, which is covered in the next chapter.

3.   Interpersonal Trust

3.1   Introduction

Trust within a relationship is based on the trust one partner has in another. This individual-level, interpersonal construct is the building block of dyadic trust, which is the focus of this research. For this reason, the key components of interpersonal trust at the individual level will first be reviewed in this chapter before taking a two-sided dyadic perspective in the next chapter. This chapter reviews the literature relating to interpersonal trust with a concentration on the relational nature of trust between two people within the workplace, and more specifically, in coworker relationships within organisations.

The concept of interpersonal trust has its roots in classical philosophy and "the phenomenon of trust is probably as old as the earliest forms of human association" (Möllering et al., 2004, p. 557). In more recent times, social scientists, psychologists, and management scholars have identified trust as a key part of social relationships (e.g., Deutsch, 1960, Rotter, 1967, Zand, 1972). Seminal publications in the field of management in the mid 1990s (e.g., Kramer & Tyler, 1996; Mayer et al., 1995, McAllister, 1995, Rousseau et al., 1998) laid the foundation for the study of trust within organisations as a central topic of interest. Since then, trust has become established as a core concept in the study of organisational behaviour and interpersonal relationships within organisations, and numerous theoretical and empirical studies have been published (Dirks & de Jong, 2022).

The growth of interest in interpersonal trust within organisations can be explained to some extent by the changing nature of work in recent times. Modern work design has moved from predominantly task-based, independent, stable job roles within organisational hierarchies to more rapidly changing, knowledge-based, interdependent work within flatter organisational structures (Grant & Parker, 2009). Thus, the increasing levels of role interdependence between workers has led to a greater emphasis on the importance of high-

quality work relationships. Trust has been identified as a common work relationship dimension in several work relationship theories and the role of trust as a social mechanism to facilitate good interpersonal interactions has increasingly been recognised (Ferris et al., 2009).

The growth of interest in the study of trust within organisational contexts can additionally be explained by the mounting evidence that higher levels of trust have important benefits for both organisations and individuals. Several meta-analyses have provided evidence regarding the relationship between trust and a wide variety of desirable work outcomes across a range of organisational settings (for a review, see Dirks & de Jong, 2022). Trust has been linked to higher performance (at both individual and team level), to increases in desirable work behaviours (organisational citizenship, knowledge sharing and learning, employee retention), and to key work attitudes (job satisfaction, affective commitment, organisational identification). While most meta-analytic studies address trust at the individual and the team level, one meta-analysis (Kong et al., 2014) examined dyadic trust outcomes. Specifically, Kong and colleagues reviewed trust research within a negotiation context and found that trust increased integrative behaviours that benefited joint outcomes and decreased distributive behaviours that prioritised self-interest. Empirical dyadic trust studies have mainly focused on relationship quality and cooperative behaviour outcomes arising from trust between two parties in a work relationship (Korsgaard et al., 2015; Korsgaard, 2018).

Trust has been found to be essential for all types of work relationships, including leaders and followers (Dirks & Ferrin, 2002), team workers (de Jong et al., 2016), negotiators (Kong et al., 2014), mentors and proteges (Ghosh, 2014), job applicants and recruiters (Klotz et al., 2013), and organisational newcomers (Schaubroeck et al., 2013; van der Werff & Buckley, 2017). In the era of flatter organisational structures and increasing role interdependence, several studies have highlighted the importance of trust between

coworkers, both in general as a group (e.g., Chughtai & Buckley, 2013; Colquitt et al., 2011; Ferres et al., 2004; Settoon & Mossholder, 2002; Tan & Lim, 2009; van der Werff & Buckley, 2017) and trust in a specific coworker (e.g., Alexopoulous & Buckley, 2013; Chung & Jackson, 2011; Dirks & Skarlicki, 2009; Ferrin et al., 2006; Lau & Liden, 2008; McAllister, 1995). These studies highlight both the increasingly important role of coworker relationships for organisations and the importance of dyadic trust as a feature of effective coworker relationships.

This chapter aims to provide an overview of the theoretical foundations of interpersonal trust and the supporting evidence from empirical studies. It begins by defining interpersonal trust and its key features. It then identifies and discusses the key antecedents of interpersonal trust. The final sections of this chapter discuss key outcomes of trust, with a particular emphasis on relational outcomes directed at the other party.

3.2   Interpersonal Trust Definition

Several conceptualisations and definitions of interpersonal trust have emerged in the management and organisational literatures (reviewed by Dietz & Den Hartog, 2006). While the social and behavioural science disciplines continue to employ an array of trust definitions, two influential and comparable definitions are adopted within this research. Mayer et al. (1995, p. 712) defined trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party". Similarly, in a cross-discipline review, Rousseau et al. (1998, p. 395) defined trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another". Both definitions share two primary components with most other definitions: a willingness to accept vulnerability and exposure

to risk based on beliefs and positive expectations about the intentions of another party (Colquitt et al., 2007; Lewicki & Brinsfield, 2012).

Interdependence, where the interests of one person cannot be achieved without reliance upon another person, is an essential condition for trust (Rousseau et al., 1998; Sheppard & Sherman, 1998). Trust is not needed in situations of complete certainty which involve no risk (Lewis & Weigert, 1985). It is both dependence on and lack of control over the actions of another person that creates potential doubt and risk, giving rise to the need for trust, and a "leap of faith" (Möllering, 2001) regarding positive expectations. In addition, trust is also situation specific, where the trustor's ongoing assessment of both the quality of the relationship and the immediate context can make trust a dynamic and fluctuating concept over time (Mayer et al., 1995). Thus, trust can be considered a psychological state held by one party (the trustor) regarding another party (the trustee), relating to interdependence involving some form of vulnerability or risk to the trustor.

3.3   Vulnerability and Exposure to Risk

Essential to the trusting process is the concept of vulnerability, which involves exposure to risk (Mayer et al., 1995, Rousseau et al., 1998). Dependence on the actions of another in whom one has confidence, but without the ability to monitor or control those actions, comes with the risk of negative outcomes. Theorists have distinguished between trust as a willingness to be vulnerable (or an intention to take a risk) and actually becoming vulnerable, which involves risk-taking behaviour (Colquitt et al., 2007; Mayer et al., 1995). Trust has been described as involving a mental leap of faith (Möllering, 2001) where risk of the unknowable is suspended or accepted in order to benefit from the advantages dependence has to offer. Despite being recognised as a core element of the trust process, very little theoretical or empirical research has explicitly examined vulnerability itself, which is a

somewhat vague concept subject to different understandings and interpretations (Misztal, 2011; Nienaber et al., 2015a).

The specific nature of the vulnerability and the particular risk characteristics depend on each unique relationship and situational context. There is no need for trust if the situation does not involve risk or vulnerability. Vulnerability has been classified as active or passive (Mayer & Gavin, 2005). Active vulnerability can include behaviours that increase risk and vulnerability (e.g., the sharing of sensitive information), and behaviours that reduce risk and vulnerability (e.g., monitoring or gathering of self-protective evidence). Passive vulnerability arises from the lack of engagement in self-protective behaviours, which increases vulnerability but can have other advantages such as freeing up time and cognitive resources. In a slightly different emphasis, Nienaber et al. (2015a) proposed that passive vulnerability consists of reliance, whereas active vulnerability involves disclosure of sensitive information. Most research has focused on passive vulnerability in the form of reliance (Nienaber et al., 2015a). In recent years, an operationalisation of trust intentions and vulnerability consisting of two dimensions (reliance intentions and disclosure intentions) has become increasingly popular in empirical trust research (Behavioural Trust Inventory; BTI; Gillespie, 2003). Trust reliance intentions are considered to be more cognitive in nature, reflecting a rational decision to depend on another, whereas trust disclosure intentions are more affective, driven by interpersonal closeness and bonds of attachment.

It is unclear how much trustor vulnerability is required to engender trustee reciprocity. The norm of reciprocity (Gouldner, 1960) suggests that initial trusting acts, whatever their magnitude, will be reciprocated because of a felt obligation to return any help received. Most models of trust development (e.g., Lewicki & Bunker, 1996; Rempel et al., 1985) propose that trustors take relatively small risks initially, which increase gradually as the relationship develops. However, experimental trust research has shown initial cautious behaviour can be viewed as negative, or not recognised as vulnerability at all, while higher

initial risk-taking or expressions of vulnerability result in higher levels of reciprocity (Pillutla et al., 2003).

Paradoxically, trust can both produce and reduce vulnerability (Misztal, 2011, pp. 120–122). Trust is a willingness to be vulnerable, but secure established relationships engender confidence and reduce vulnerability through reciprocity and mutual trust. In contrast, imbalanced relationships of dependency can increase trustor vulnerability. Furthermore, while vulnerability creates the opportunity for trust development, it can also increase the risk of trust erosion, which has been explained by self-regulatory theory (Lapidot et al., 2007). More vulnerable situations can activate a trustor's prevention focus, which may result in more attentiveness to negative trustee behaviours that can erode trust. Conversely, less vulnerable situations can activate a trustor's promotion focus, giving emphasis to growth and development needs, which may result in more attentiveness to positive trustee behaviours. Relationships are complex and may exhibit ambivalent characteristics as a result of the coexistence of these positive and negative aspects of vulnerability and trust (Methot et al., 2017).

Although rarely explored, vulnerability occurs for both parties in a dyadic trust-based relationship. When a trustor trusts a trustee, they have an expectation that their vulnerability will not be exploited. In exchange, the trustee feels an obligation to meet that expectation and to avoid exploiting or disappointing the trustee (Mayer et al., 1995; Rousseau et al., 1998). However, trust can also bring about vulnerability for the trustee, as while feeling trusted can be beneficial to job performance, it can also result in increased responsibility, workload, stress, and risk of exploitation (Baer et al., 2015).

The review by Nienaber et al. (2015a) proposes that positive expectations are more strongly related to cognition-based trust, whereas willingness to be vulnerable is more strongly related to affect-based trust. In this respect, risk-taking behaviour arising from positive expectations may be more transactional, whereas acceptance of vulnerability may

arise from the development of emotional bonds and personal interactions between two parties. In this sense, the essence of willingness to be vulnerable may be one of the more fundamentally relational and reciprocal elements of the trust process.

3.4 Affect-based Relational Trust

Many scholars have proposed that trust involves emotional bonds and attachment between the trustor and the trustee. Sociological literature has highlighted trust based on emotion in addition to trust based on rational cognition, with emotions more applicable to close personal relationships than to social systems (Lewis & Weigert, 1985). Trust in close relationships can involve emotional support, emotional intimacy, emotional security, and emotional risk (Rempel et al., 1985).

Building on this earlier research, McAllister (1995) extended the concept of affect-based trust to workplace relationships. This research involved peer-to-peer professional relationships and showed the presence of affect-based trust (based on interpersonal emotional bonds) which is highly correlated with but differentiated from cognition-based trust (based on trustworthiness assessments of reliability and dependability). Affect-based trust was found to grow from cognition-based trust, from repeated interactions, and from reciprocal helping behaviours. Webber (2008) demonstrated that cognition-based trust (arising from trustworthiness assessments of reliability, dependability, and competence) and affect-based trust (arising from interpersonal care, concern, and emotional bonds) emerge as separate components in work teams over time. Schaubroeck et al. (2013) showed that affect-based trust develops from cognition-based trust and later influences performance and organisational identification. Similarities exist between affect-based trust (McAllister, 1995) and the benevolence facet of trustworthiness (Mayer et al., 1995), although the former places more emphasis on emotion and on the dyadic nature of trust. In this respect, affect-based trust can be a valuable indicator of the quality of a dyadic relationship (Colquitt et al., 2014).

While some conceptualisations of affect-based trust include only affective reactions of the trustor (e.g., Dunn & Schweitzer, 2005), most conceptualisations include both affective responses and affect-based attachments. For example, Williams (2001) proposed an affective-cognitive model of trust development involving cognition-based trustworthiness assessment, affective attachment via social group membership, and affective responses arising from social categorisations processes. Van Knippenberg (2018) has argued that the concept of affect-based trust has confounded the affective basis of trust with the relationship basis of trust. He proposes that cognition-based trust is a form of person-based trust built from trustworthiness perceptions, whereas affect-based trust is a form of relationship-based trust influenced by the quality of the relationship between parties. This is akin to the character-based and relationship-based trust perspectives identified by Dirks and Ferrin (2002). Similarly, a recent critical review and meta-analysis (Legood et al., 2023) argues that the current conceptualisation of affect-based trust (McAllister, 1995) is really a cognitive assessment of relational trust, and the influence of affective states require more research attention. While affective states such as mood and emotions undoubtedly influence the process of trust (e.g., Dunn & Schweitzer, 2005), there is a strong case to conceptually distinguish this line of research from affect-based relational trust (Legood et al., 2023; van Knippenberg, 2018). In this vein, Lee et al. (2023) have recently proposed a conceptual model that distinguishes the role emotions play in the trust process, while recognising it occurs within a relational context.

Affect-based trust can be considered a form of relational trust (Rousseau et al., 1998) based on repeated interactions and emotional reciprocal attachment. It is closely related to identification-based trust (Lewicki & Bunker, 1996; Shapiro et al., 1992), growing from more cognition-based processes of calculus-based and knowledge-based trust (Lewicki & Bunker, 1996), or deterrence-based and knowledge-based trust (Shapiro et al., 1992). A comparable trust conceptualisation from Jones and George (1998) differentiated between

conditional trust, which is transactional in nature and based on positive expectations, and unconditional trust, which is influenced over time by mutual identification and positive affect. Trust has been conceptualised as an emotional phenomenon, generated within the context of enduring relationships (Flores & Solomon, 1998). Although consensus on the role of affect in relation to trustworthiness assessments and trust has not been reached in the current literature, there is general agreement that affect-based relational perspectives on trust extend and supplement more transactional cognition-based perspectives (Colquitt et al., 2014; Dietz & Den Hartog, 2006; Lewicki & Bunker, 1996; McAllister, 1995; Rousseau et al., 1998; van Knippenberg, 2018; Williams, 2001). However, even though named relational trust, the perspective taken in most of the trust research to date is that of the trustor, examining bonds that the trustor has towards the trustee, and not a two-way relational process.

3.5   Antecedents of Trust

This section reviews two key antecedents which explain why one individual decides to trust another. Trust propensity and trustworthiness assessments were highlighted in the integrative model of trust provided by Mayer et al. (1995). This influential model clearly delineated these two antecedents from the concept of trust itself and has been widely adopted in the trust literature since that date (Baer & Colquitt, 2018; Colquitt et al., 2007; Lu et al., 2017). In this model, trust propensity is positioned as a dispositional characteristic of the trustor, and trustworthiness is a characteristic of the trustee, as perceived by the trustor. Each of these antecedents is explored in further detail in the following sections.

3.5.1 Trust Propensity

Research has established that trust is influenced by the personality of the trustor in terms of trust propensity (Colquitt et al., 2007). In one of the first conceptualisations of trust as a dispositional factor, Rotter (1967, p. 651) defined interpersonal trust as "an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon". This generalised expectation about the reliability of others is thought to develop from early life experiences and becomes a belief about other people in general, across situations and contexts. In a similar vein, Mayer et al. (1995, p. 715) defined trust propensity as a "general willingness to trust others", which independently influences the effect of trustworthiness assessments on the formation of trust. Other definitions similarly regard trust propensity as a general positive belief in human nature, although individual definitions differ somewhat in their specific emphases (for a summary of definitions see Patent & Searle, 2019, p. 3). Limitations in the measurement scales available in terms of reliability and multidimensionality have been highlighted (Schoorman et al., 2007). In addition, the measurement of trust propensity as a general within-person tendency has often been biased by the inclusion of specific referents (Frazier et al., 2013).

Trust propensity is generally considered as a narrow personality facet belonging to the broader personality domain of agreeableness within the Big Five model (Costa & McCrae, 1992). Both agreeableness and trust propensity have been linked to interpersonal trust and to knowledge sharing (Mooradian et al., 2006). However, this may be overly simplistic as trust propensity may comprise multiple dimensions of personality. For example, a cross-discipline literature review (Thielman & Hilbig, 2015) found that trait anxiety and fear (within the neuroticism personality domain) can explain individual differences in risk aversion which is related to trust propensity. A recent study by Alarcon et al. (2022) found evidence that trust propensity has a three-factor structure (trust, distrust,

and suspicion) within the overall personality domain of agreeableness. Optimism has been examined as a similar but distinct dispositional construct, related to trust propensity, and significantly related to trustworthiness benevolence perceptions (Frazier et al., 2013). Attachment styles have also been associated with trustworthiness perceptions and with trust (Frazier et al., 2015). However, the research on other trait-like antecedents to trust has been infrequent, and trust propensity has been the most commonly studied dispositional antecedent to trust (Colquitt et al. 2007).

Trust propensity is typically conceptualised as a stable, trait-like variable across contexts and situations, although two recent study have suggested it may be situationally specific and can have unstable state-like components during periods of change such as career transitions (van der Werff et al., 2019a) or even daily based on positive or negative interactions with coworkers (Baer et al., 2018). Trust propensity plays a particularly relevant role in the early stages of relationships where there is a lack of prior experience with the trustee (McKnight, et al., 1998). It also plays a strong role when information is limited, such as a lack of social cues in virtual interactions (Yakovleva et al., 2010). The influence of trust propensity has been shown to decline in relationships over time, as situational trust cues develop and the relationship becomes established (Colquitt et al., 2007; van der Werff & Buckley, 2017). Thus, trust propensity can be considered as a proximal antecedent in newer relationships or unfamiliar situations, but a more distal antecedent of declining influence in established relationships and familiar settings.

3.5.2 Trustworthiness Perceptions

The concept of trustworthiness is fundamental to understanding the formation of interpersonal trust. Trust involves positive expectations of the intentions or behaviour of another which requires an evaluation of the competence and character of the trustee by the

trustor. While the two terms are sometimes used interchangeably, trustworthiness is a distinct and separate construct from trust. One of the most influential conceptualisations of trustworthiness is that of Mayer et al. (1995) which defines trustworthiness as a perception by the trustor of three independent but interrelated characteristics of the trustee. Firstly, ability is "that group of skills, competencies, and characteristics that enable a party to have influence within some specific domain" (Mayer et al., 1995, p. 717). Ability refers to the perceived expertise, knowledge, and capability of the trustee. Secondly, benevolence is "the extent to which the trustee is believed to want to do good to the trustor, aside from an egocentric profit motive" (Mayer et al., 1995, p. 718). Benevolence involves an interpersonal orientation, including care, concern, loyalty, altruism, and general goodwill towards others in general and the trustor in particular. Integrity is "the perception that the trustee adheres to a set of principles that the trustor finds acceptable" and "the extent to which the party's actions are congruent with his or her words" (Mayer et al., 1995, p. 719). Integrity involves value congruence (with the trustor), consistency, reliability, fairness, honesty, openness, discretion, and promise fulfilment.

While a broad range of trustworthiness components has been examined within the literature, most factors can be incorporated within the parsimonious "ABI" model of ability, benevolence, and integrity (Mayer et al., 1995). Subsequent theoretical and empirical research has provided considerable support for this integrative model of trustworthiness. In a meta-analysis of extant trust research, Colquitt et al. (2007) found that while the three trustworthiness dimensions are highly correlated with each other, each has a unique, significant relationship with trust. While a high level of all three factors is an ideal environment for trust, each of the three factors can vary along a continuum (Mayer et al., 1995).

Perceptions of ability and integrity are considered to be more cognitive in nature (Schoorman et al., 2007), whereas perceptions of benevolence are judged to be more

affective in nature (Colquitt et al., 2007; 2011). However, integrity may also have an affective element as it may inspire an emotional response in the trustor (Dietz & Den Hartog, 2006). Empirical evidence shows that ability has stronger associations with the more cognitive reliance trust intentions, whereas benevolence has stronger associations with the more affective disclosure trust intentions (Tomlinson et al., 2020; van der Werff & Buckley, 2017). The evidence on integrity is mixed, as Tomlinson et al. (2020) reported links between elements of integrity and both reliance and disclosure, whereas van der Werff & Buckley (2017) found no links between integrity and either reliance or disclosure.

While all three trustworthiness factors are not always required to engender trust, a perceived lack of any of the three factors can undermine trust, depending on the context. For example, as predictors of trust, ability may play a more significant role in manufacturing jobs than in managerial jobs, benevolence may play a more significant role in manufacturing and service jobs than in managerial jobs, and integrity may play a more significant role in managerial and service jobs than in manufacturing jobs (Colquitt et al., 2007). Furthermore, the importance of individual factors may vary depending on the referent. Knoll and Gill (2011) found that while benevolence and integrity were significantly more important than ability in relation to trust in a supervisor, all three factors were equally important in relation to trust in a peer. Werbel and Henriques (2009) found that follower trust in leaders was predicted by perceptions of their competence and integrity, driven by resource allocation and fairness concerns, whereas leader trust in followers was predicted by perceptions of their receptivity, driven by delegation needs.

Higher degrees of vulnerability and risk increase the importance of perceived trustworthiness. However, the relative importance of specific trustworthiness dimensions can depend on the nature and degree of situational vulnerability. In a study of army cadets, ability was found to be more salient in more vulnerable and risky situations, whereas benevolence was found to be more salient in less vulnerable and safer situations (Lapidot et

al., 2007). In a similar study of firefighters, Colquitt et al. (2011) found that integrity was most salient in highly vulnerable and non-routine situations, whereas benevolence and identification-based trust were most salient in less vulnerable and more routine situations. The implications seem to be that ability and integrity become more pertinent in highly vulnerable situations, whereas benevolence and identification (the value and emotional significance attached to the relationship) becomes more pertinent in less vulnerable situations. This was the case in a study of insurance agents (Tan & Lim, 2009) where only benevolence and integrity were found to influence trust in coworkers. A similar study of financial service coworkers demonstrated interactive effects of ability and integrity (Dirks & Skarlicki, 2009). However, studies regarding which trustworthiness facets matter more in which situations and how they interact remain uncommon (Baer & Colquitt, 2018; Dietz & Den Hartog, 2006).

Some researchers have advocated for a distinction between two aspects of integrity, word-action consistency (behavioural integrity; Simons, 2002; Simons et al., 2022) and congruence between the values of the trustor and the trustee (values congruence). A fundamental characteristic of the broader concept of integrity is that enacted values by the trustee conform to a set of principles that the trustor finds acceptable, in addition to consistency between words and actions (Mayer et al. 1995). In contrast, the narrower concept of behavioural integrity focuses solely on perceived alignment between the words and actions of the trustee, regardless of their moral characteristics or acceptability by the trustor (Simons, 2002). In a meta-analysis, Simons et al. (2015) found that behavioural integrity has stronger associations with trust, performance, and citizenship behaviour than the effects of the broader integrity concept. Moorman et al. (2018) found that behavioural integrity was associated with cognition-based trust (reliance trust) but not with affect-based trust (disclosure trust). Similarly, Tomlinson et al. (2020) found that behavioural integrity and ability had stronger associations with cognition-based trust (reliance trust), whereas values

congruence and benevolence had stronger associations with affect-based trust (disclosure trust). However, despite the conceptual distinction between behavioural integrity and values congruence, the broader concept of integrity as proposed by Mayer at al. (1995) and the scale developed by Mayer and Davis (1999) remains the dominant measure of integrity in trust research (Baer & Colquitt, 2018; Colquitt et al., 2007; McEvily & Tortoriello, 2011).

While most research has concentrated on trustworthiness as a perception by a trustor, a small amount of research has examined trustworthiness as an active process of trust seeking by a trustee. For example, Whitener et al. (1998) proposed several ways in which trustees could influence the trustworthiness perceptions of a trustor including behavioural consistency, behavioural integrity, delegation, communication, and demonstration of concern. In addition, some research has highlighted the potential tension and conflict between benevolence and integrity on the part of the trustee. Conceptualising trustworthiness as the trustee's motivation to act, Moore et al. (2019) suggest that benevolence motivations differ from integrity motivations. Trustee behavioural choices driven by benevolence could primarily stem from relationships with specific individuals, involve emotional responses, and are highly contextual and relatively easy to evaluate in isolation on a case-by-case basis. In contrast, trustee behavioural choices driven by integrity might be guided by the trustee's values and standards that apply to all individuals, arise more from cognitive processing and reason-based principles, and are harder to evaluate in isolation as they require consistent adherence to principles and becomes more relevant within a larger number of similar cases. Recent experimental work (Levine & Schweitzer, 2014; 2015) has illustrated a complex relationship between benevolence and integrity, demonstrating that prosocial lies from the trustee lead to both benevolence and integrity attributions by the trustor, and that benevolent behaviour may be more important than honesty to promote trust.

The main criticism of the ABI model is that its predominance has led to a narrow focus in trust research, and the ignoring of other antecedents to trust, such as individual

differences and situational context (Baer & Colquitt, 2018). Furthermore, the ABI model is acknowledged as being mainly cognition-based, reflecting a rational evaluation by the trustor, and ignoring the less rational foundations of trust such as affect and swift trust heuristics, albeit that some form of emotional attachment is included in the benevolence facet of trustworthiness (Baer et al., 2018b). Much empirical work on trust has focussed on cognition-based trust (e.g., Dirks & Ferrin, 2002), and the role of affect in trust is under-investigated (Legood et al., 2023; van Knippenberg, 2018). Despite these criticisms, use of the ABI model of trustworthiness has endured over time and it remains one of the most effective proximal predictors of trust across situations and contexts (Dirks & de Jong, 2022).

3.6 Trust and Interpersonal Citizenship Behaviour

Trust has been linked with a range of beneficial work outcomes including performance, behaviours, and attitudes (for a review, see Dirks & de Jong, 2022). One of the most studied outcomes of trust is that of organisational citizenship behaviour (Colquitt et al., 2007; Dirk & Ferrin, 2002; Legood et al., 2020). Given that the focus of this study is on dyadic interpersonal relationships, this section concentrates on interpersonal behavioural outcomes that are directly related to the other party in the trust relationship. As the most common interpersonal behavioural outcome of trust explored in empirical dyadic trust research is that of cooperation and helping (Korsgaard et al., 2015; Korsgaard, 2018), this section concentrates on behaviours that fall into this category.

Organisational citizenship behaviour (OCB; Organ, 1988) refers to helpful behaviour that is outside an individual's work role, not directly rewarded, and conducive to effective organisational processes and outcomes. Examples of OCB include organisational loyalty, civic virtue, sportsmanship, individual initiative, and self-development (Podsakoff et al., 2000). Helping behaviour, which involves voluntarily helping others, has long been identified as an important form of citizenship. Interpersonal citizenship behaviour (ICB)

refers to a specific type of OCB that directly helps another person, including helping others with work-related problems and helping others by taking steps to prevent the creation of problems (Podsakoff et al., 2000). ICB is closely related to the earlier concept of OCB-I (Williams & Anderson, 1991), and is similar to the concepts of altruism, courtesy, facilitation, and to helping workplace behaviours in general. It can be considered to belong to a broader category of prosocial behaviour which includes knowledge sharing and mentoring (Bolino & Grant, 2016). ICB directly helps a specific relational partner or a group of partners, and indirectly helps the organisation. Meta-analysis has found that ICB is beneficial to both individual and organisational performance (Podsakoff et al., 2009).

Settoon and Mossholder (2002) conceptualised and operationalised two complementary but distinct types of interpersonal helping behaviour: task-focused ICB and person-focused ICB. Task-focused ICB refers to discretionary behaviour that provides assistance to others related to the job at hand and solves task-related difficulties or problems. Although still involving interpersonal connection, task-focused ICB is often more instrumental than personal in nature, motivated primarily by task-performance considerations. Examples include providing work-related information and advice, sharing work-related expertise, and providing direct task assistance. In contrast, person-focused ICB refers to discretionary behaviour that provides assistance of a more personal nature to others, motivated by friendship and social support. Examples include listening, demonstrating care and concern, and providing emotional support and advice. Both forms of ICB uniquely contribute to optimal organisational performance through productivity (task-focused ICB) and effective interpersonal relationships (person-focused ICB).

Motivation to engage in interpersonal helping behaviour has been explained by individual factors and relationship factors. Individual factors include a dispositional concern for others (Lester et al., 2008) and prosocial motivation (Grant & Sumanth, 2009). Motivation to help may also be explained by the quality of the relationship. Bowler and

Brass (2006) shifted the focus of ICB motivation from individual dispositional and attitudinal variables to relationship variables by demonstrating that both the performance and receipt of ICB between workers was related to the strength of their relationship. Reciprocal effects have also been demonstrated in social network studies such that the receipt of interpersonal help behaviour is related to the giving of help to others (e.g., Lyons & Scott, 2012). However, other research suggests that help might not be reciprocated if the recipient interprets helping as a status threat or experiences envy (Tai et al., 2023).

ICB is generally considered to be positive, bringing benefits to organisations and individuals, but there is some evidence that giving help can result in negative outcomes for the individual helper. On the positive side, helping can increase positive affect for the helper and fulfil basic human needs such as competence and relatedness (Koopman et al., 2016), especially when helping is voluntary (Lin et al., 2019). However, helpers can experience negative consequences and be vulnerable to exploitation as a result of helping. Good citizens can suffer from resource depletion (Lanaj et al., 2016; Lin et al., 2020), negative affect when the impact of helping is perceived as low (Lanaj & Jennings, 2020), lack of personal work goal progress (Koopman et al., 2016), and slower career progression in organisations that primarily reward individual performance (Bergeron et al., 2013). Ultimately, the burden of helping can result in self-serving and destructive interpersonal acts from the helper (Gabriel et al., 2018), as well as psychological entitlement and workplace deviance behaviours (Yam et al., 2017). When trust is high, giving help can result in positive feelings of pride, but when trust is low, giving help can result in irritation (Watkins et al., 2022).

As both task-focused ICB and person-focused ICB are fundamentally relational and discretionary, they are particularly relevant to the examination of interpersonal trust. Indeed, the association between trust and ICB has long been recognised, both explicitly (McAllister, 1995) and within the broader concept of OCB (Konovsky & Pugh, 1994). Since then, numerous studies have demonstrated a link between trust and ICB in a range of

organisational settings and relationships. ICB can be an antecedent of trust (e.g., de Jong et al., 2007; Ferrin et al., 2006; Parker et al., 2023; Settoon & Mossholder, 2002; Yang & Mossholder, 2010; Zhu & Achtar, 2014), an outcome of trust (e.g., Brower et al., 2009; Gabriel et al., 2020; Kacmar et al., 2012; Yang et al., 2009), and both an antecedent and an outcome in a reciprocal process (Halbesleben & Wheeler, 2015). Furthermore, trust is associated with both the receipt of help (e.g., de Jong et al., 2007; Ferrin et al., 2006; Yakovleva et al., 2010) and the provision of help (e.g., Brower et al., 2009; Kacmar et al., 2012; McAllister, 1995), depending on the context. The first meta-analysis on trust and leadership found associations between trust in leadership and specific relational forms of OCB, namely altruism and courtesy (Dirks & Ferrin, 2002). Subsequent meta-analyses on trust in leadership (Legood et al., 2020) and trust in both leaders and coworkers (Colquitt et al., 2007) have shown a relationship between trust and the broader factor of OCB, but they have not explicitly isolated or reported the interpersonal citizenship element.

In recognition of the threats as well as the benefits of cooperation and helping to both parties, Williams (2007) has proposed a threat regulation model of trust and cooperation. In this model, trustees are not passive recipients of trustworthiness assessments, rather they are active seekers of the trust and cooperation necessary for the goals of both parties in a trust relationship. Although this model is specified at an individual level, it explicitly acknowledges the dyadic nature of trust in that both parties in a relationship engage in threat regulation simultaneously. Potential threats are actively anticipated by each party through the trust building mechanisms of perspective taking, threat reducing behaviour, and self-reflection, thereby reducing obstacles to collaboration.

In summary, interpersonal helping is recognised as a key feature of trust-based relationships (Korsgaard et al., 2015; Korsgaard, 2018). Helping behaviours within a relationship are generally considered to be desirable and have been positively associated with relationship quality (Bowler & Brass, 2006) and with trust (e.g., Brower et al., 2009;

McAllister, 1995; Settoon & Mossholder, 2002). However, as helping behaviours can both support and hinder each party in a relationship, good citizens must find a balance between focusing on their own goals and wellbeing, while also maintaining good relationships with others and recognising their needs and concerns.

3.7   Downsides to Interpersonal Trust

While trust is generally considered to be beneficial to both parties in a trust relationship, trust can also have detrimental effects for either party in certain circumstances, arising from unintended consequences or deliberate exploitation (Skinner et al., 2014). Of course, vulnerability and risk, as outlined in section 3.3, are fundamental aspects of trust and the possibility of disappointment or betrayal arising from mistaken judgement or misplaced trust is inherent to the trust experience. Trust given must be matched to trust warranted in order to avoid negative outcomes, but the nature of trust means that this cannot be guaranteed. However, aside from the regrettable but necessary risks associated with trust, researchers have highlighted the darker side of high-trust relationships, where extreme trust levels can result in negative outcomes for one or both parties (Gargiulo & Ertug, 2006; Wicks et al., 1999).

Gargiulo and Ertug (2006) highlight three ways in which high-trust relationships are prone to detrimental outcomes for one or both parties when trust moves beyond some critical threshold. Firstly, less monitoring and less vigilance which brings the benefit of lower information processing costs can move trust from a reasonable 'leap of faith' situation to an ill-judged 'blind faith' situation with loss of oversight and risk of wrongdoing or error, resulting in unmet expectations (of the trustor) and unfulfilled obligations (of the trustee). Secondly, greater satisfaction and commitment in a relationship which is usually beneficial can, at very high levels, lead to dysfunctional complacency and lack of action by both parties

regarding inadequate relationship outcomes. Thirdly, trust building exchanges and communication can lead to excessive obligations and interdependence in relationships. The idea of an optimal level of trust matched to the context has been proposed (Wicks et al., 1999). In this conceptualisation, trust is optimal when trust and interdependence levels are matched, such that relationships of high interdependence benefit from high trust, but relationships of low interdependence do not warrant an investment in trust building.

Evidence exists for an inverted U-shaped relationship on the benefits of trust, such that there is a point at which the benefits of high trust are offset by dysfunctional behaviours such as lack of objectivity, lack of questioning, lower monitoring, and overcommitment to the relationship (Villena et al., 2019). Empirical research has also shown that while a high level of trust can contribute to performance by reducing monitoring effort, it can also be a liability in situations where there is a high level of individual autonomy (Langfred, 2004). High trust levels can result in parties being reluctant to monitor each other, but some monitoring may be advisable for quality control and avoidance of errors. Lack of monitoring can be foolish in situations of high risk, even when there is high trust, and especially when there is high individual autonomy. Furthermore, while low levels of trust are generally considered undesirable, they may be appropriate if the recipient does not want the workload or responsibility that comes with higher levels of trust (Baer et al., 2015; 2021).

Given the double-edged nature of trust, the challenge within workplace relationships is to strike a balance between too little and too much trust, depending on the context, in order to gain the optimal benefits from trust.

3.8   Chapter Summary

This chapter has given an overview of the theoretical foundations of interpersonal trust and the supporting empirical research. Key components of the trust process have been

described, including vulnerability and risk, trust propensity, trustworthiness assessments, affect-based relational trust, and trust-based interpersonal helping behaviours. The negative outcomes of excessive trust have also been highlighted. While trust theory has implicitly focused on the relational nature of the phenomenon, empirical research has mainly been one-sided, measuring one person's attitude towards the other (Fulmer & Gefland, 2012), with less focus on reciprocal influences. The next chapter addresses the two-sided nature of trust in more detail.

4.   Dyadic Trust

4.1   Introduction

Interpersonal trust as defined in the previous chapter is a psychological state within an individual directed at a specific trust referent (Rousseau et al., 1998). It is mostly examined as a unidirectional phenomenon, yet it is generally accepted that interpersonal trust occurs within a relationship where two people have repeated interactions leading to mutually beneficial outcomes. Thus, each individual in the relationship is both a trustor, making decisions to trust to the other party, and a trustee, signalling their own trustworthiness in order to encourage reciprocation of trust from the other party. By recognising this relational context, dyadic trust can be considered a dynamic bidirectional phenomenon between two individuals where both parties engage in an ongoing interactive process of trusting and being trusted. Most trust research has been one-sided, focussing on the trust one party has in the other (Fulmer & Gelfand, 2012; Krasikova & LeBreton, 2012). Adopting a dyadic bidirectional viewpoint can provide a more complete picture of the nature of trust and its role in effective work relationships.

This chapter aims to review in detail the theory and empirical evidence explaining dyadic trust development and dyadic trust patterns in interpersonal relationships within organisations. It begins with a definition of dyadic trust and then reviews the empirical evidence that examines trust as a dyadic phenomenon by observing both sides of a trust relationship. It then focuses on three key aspects of dyadic trust and presents a series of hypotheses. First, it examines reciprocal patterns of influence and presents a set of hypotheses in relation to bilateral influence within the dyad. It then moves on to explore the development of trust over time and presents a set of hypotheses in relation to longitudinal and dyadic trust development. The final part of this chapter examines dyadic trust levels and presents a set of hypotheses in relation to trust convergence/divergence within the dyad.

4.2   Dyadic Trust Definition

Even though the relational context of trust is inherent in the definition of interpersonal trust adopted in this research, the conceptualisation of trust as a psychological state has meant that the two-sided nature of trust as a process is not called out explicitly in this perspective. For example, a limitation of the trustworthiness model of interpersonal trust from Mayer et al. (1995) is that it conceptualises trust as unidirectional and does not illustrate the interactive and reciprocal role of the two parties in the trust process (Schoorman et al., 2007). Furthermore, as the amount of theory and research explicitly addressing both sides of a trust relationship is small, definitions explicitly highlighting the bilateral nature of trust are uncommon.

To reciprocate means 'to give and take mutually; to return in kind or degree' (Merrion-Webster, n.d.). Indeed, there is some overlap between the use of 'reciprocal' and 'mutual' in the literature. An early definition of mutual trust described it as "complementary social trust with regard to each other's behavior" and where "each perceives that the other person is aware of his intent and his trust" (Deutsch, 1958, p. 267). In this respect, mutual trust is understood as an equal or shared level of trust between two parties. A subsequent study of reciprocal trust defined it as "the trust that results when a party observes the actions of another and reconsiders one's attitudes and subsequent behaviors based on those observations" (Serva et al., 2005, p. 627). Although this definition recognises the dynamic aspect of trust development based on reciprocal responses from the other party, it does not explicitly incorporate the role of both parties as mutual trustors and trustees simultaneously (although the empirical analysis in this study does address it). This study also distinguishes reciprocal trust from mutual trust, as it highlights that trust equivalence is not essential to the process of reciprocal trust. Other researchers have examined dyadic trust congruence which has been defined as "a bilateral indicator of the extent to which two individuals trust each

other" (Tomlinson et al., 2009, p.174). This definition includes consideration of both the level of trust itself (low to high) and the level of similarity between the two parties.

In a broader and more comprehensive definition, dyadic trust has been defined as "an emergent property of the dyad representing the pattern of trust between two parties" (Korsgaard et al., 2015, p.49). Emergent constructs arise from the characteristics, cognitions, affect, behaviours, and interactions among individuals and the social context (Kozlowskki & Klein, 2000). This definition of dyadic trust successfully captures the nature of trust as a dynamic bilateral process between two people, both involved in trusting each other. It does not replace the concept of trust as a psychological state residing in the individual, rather it can be used alongside this definition to additionally reflect the bilateral nature of the process of trust. Within this definition, Korsgaard et al. (2015) expand on the concept of "the pattern of trust" to incorporate patterns of bilateral influence between individuals (reciprocal trust), and degrees of convergence or divergence of trust levels between the two parties (mutual trust versus asymmetric trust). These categorisations are summarised in Table 4.1.

Dyadic trust can be related to team trust, depending on the conceptualisation of team trust and the level of analysis employed (Costa et al., 2018, Fulmer & Gelfand, 2012). Dyadic trust is the building block of more finely grained studies of team trust which collect measures of dyadic trust between every pair of team members. However, the level of analysis of these types of social network studies is generally at team level or individual level rather than at a dyadic level, that is, it is the team or the individual that is the focus of interest rather than the dyadic relationships.

This study adopts the definition of dyadic trust provided by Korsgaard et al. (2015). It examines trust at the dyad level while retaining individual measures of trust. It examines dyadic trust in three ways: reciprocal patterns of influence; trust development over time; and patterns of trust incongruence or asymmetry.

Table 4.1

Dyadic Trust Conceptualisations

Dyadic Trust Category	Level of Analysis	Description	Trust Operationalisation	Typical Research Focus
Reciprocal trust	Individual within a dyad	Exchange patterns of influence of two parties on each other	Individual measures of trust of both parties	Causal links between the trust of one party on the trust of the other party
Mutual trust	Dyad	Assumption of shared trust between two parties	Aggregate or average level of two individual trust measures	The antecedents and outcomes of mutual low/medium/high trust
Asymmetric trust		The degree of trust divergence between two parties	Dispersion calculation between two individual trust measures	The moderating effect of trust asymmetry on trust processes

Developed from Korsgaard et al. (2015) and Tomlinson et al. (2009)

4.3 Dyadic Trust – Empirical Research Review

Given the less common dyadic perspective of this research study, a detailed presentation of empirical dyadic trust research is considered useful. This section presents the results of a systematic review of empirical trust research that examines the dyadic context of trust (Table 4.2). Best practice recommendations for conducting systematic empirical literature reviews were followed (e.g., Kim et al., 2020; Siddaway et al., 2019). As an earlier review was provided by Korsgaard et al. (2015), this review examined articles published since that date. To identify studies for inclusion, online database searches were conducted using PsycINFO, Web of Science, Scopus, Business Source Complete and Google Scholar. Title search keywords included "trust*" with "dyad*", "reciproc*", "*symmetr*", and

"*congruen*". Supplementing this, a review of recent and forthcoming articles of the most relevant top-tier management and psychology journals was conducted, namely Academic of Management Journal, Journal of Applied Psychology, Journal of Management, and Journal of Organizational Behavior. Also, a forward search on the review article by Korsgaard et al. (2015) was conducted on Google Scholar.

To ensure quality control search results were limited to peer-reviewed academic articles from journals with a listed impact factor. To be included, an article must have empirically examined a trust variable (trust propensity, trustworthiness, or trusting intentions) from both sides of a dyad. The same measure must have been obtained from both parties. Where both parties were included but different trust measures were obtained from each party, (e.g., trust from one party & felt trust from the other party), the article was excluded. Articles with a single-source assessment of mutual trust with a dyadic referent were excluded. The primary focus was on interpersonal trust, but interorganisational trust was also included where it was examined on a two-sided basis. Team trust studies using dyadic measures and social relations modelling were included, but studies with a team trust referent and a team level of analysis were excluded (e.g., de Jong & Dirks, 2012; de Jong et al., 2021). Studies with a dyad trust referent but an individual level of analysis were also excluded (e.g., Baer et al., 2018a; Baer et al., 2022). Articles based on both quantitative and qualitative methods were included. Field studies and experimental studies were both included. A final list of 34 relevant studies was obtained following examination for inclusion criteria. The results are summarised in Table 4.2.

Table 4.2

Dyadic Trust Empirical Studies since 2014*

Author(s)	Dyadic Approach	Sample	Trust Conceptualisation	Analysis	#Dyads	Timeframe (Timepoints)
Alarcon et al. (2018)	Reciprocal	General population (experimental)	Relationship between individual-level trust and trustworthiness	SEM, MMSA	300	Longitudinal (5)
Campagna et al (2016)	Reciprocal	Undergraduate students (experimental)	Relationship between individual-level trustworthiness	Effect sizes (Cohen's d)	71 87 81	Cross-sectional
Cheung et al. (2017)	Reciprocal	Service industries (supervisors and subordinates)	Relationship between individual-level trust	SEM, Hierarchical regression	182	Cross-sectional
Fitzpatrick & Lafontaine (2017)	Reciprocal	Romantic couples	Relationship between individual-level trust	SEM, APIM	199	Cross-sectional
Halbesleben & Wheeler (2015)	Reciprocal	Corporate Service Industries (coworkers)	Relationship between individual-level trust	SEM, Latent change score	177	Longitudinal (5)
Jones & Shah (2016)	Reciprocal	Undergraduate students	Relationship between individual-level trustworthiness	SRM, LMEM	499	Longitudinal (3)
Martínez-Tur et al. (2020)	Reciprocal	NGOs (supervisors and subordinates)	Relationship between individual-level trust	SEM	95	Cross-sectional
McEvily et al. (2017)	Reciprocal	Interorganisational (buyers and suppliers)	Relationship between individual-level trust	SUR	82	Cross-Sectional
Naber et al. (2018)	Reciprocal	Undergraduate students	Relationship between individual-level trust	APIM (Group)	216	Longitudinal (2)
Tasselli & Kilduff (2018)	Reciprocal	1. Masters students 2. Hospital critical care	Relationship between individual-level trust	Linear regression	692 418	Cross-sectional
Wilson et al. (2022)	Reciprocal	High-tech start-ups Leaders(founders) and followers (newcomers)	Relationship between individual-level trust and trustworthiness	Qualitative	12	Longitudinal (5)

(continued)

Table 4.2

Dyadic Trust Empirical Studies since 2014* (continued)

Author(s)	Dyadic Approach	Sample	Trust Conceptualisation	Analysis	#Dyads	Timeframe (Timepoints)
Yao et al. (2017)	Reciprocal	1. Undergraduate students 2. Executive education students (experimental)	Relationship between individual-level trust	APIM	98 50	Cross-sectional
Yao et al. (2021)	1. Reciprocal 2. Mutual	1. Negotiator managers 2. Undergraduate students (experimental)	1. Relationship between individual-level trust propensity 2. Dyad level trust (aggregate)	APIM OLS Regression	48 69	Cross-sectional
Yao & Storme (2021)	Reciprocal	Undergraduate students (experimental)	Relationship between individual-level trust propensity and trust	APIM SEM	130	Longitudinal (2)
Ahmed et al. (2021)	Mutual	Interorganisational (importers and exporters)	Dyad level trust (level x difference)	SEM	125	Cross-sectional
Bstieler et al. (2017)	Mutual (trust) Reciprocal (antecedents)	Interorganisational (university-industry research collaborations)	Dyad level trust (calculation not reported)	APIM	98	Cross-sectional
Cuevas et al. (2015)	Mutual	Interorganisational (Retailer & Outlets) (Aerospace & Supplier)	Dyad level trust	Qualitative	2	Cross-sectional
Gupta et al. (2016)	Mutual	Interorganisational (small business owners)	Dyad level trust (lowest individual value)	HLM	1302	Cross-sectional
Kung et al. (2018)	Mutual	Undergraduate students (experimental)	Dyad level trust (average)	OLS regression	90	Cross-sectional
Ko (2014)	Mutual	Interorganisational (businesses and consultants)	Dyad level trust (aggregate x difference)	OLS regression	80	Cross-sectional
Olekalns et al. (2014)	Mutual	Undergraduate students (experimental)	Dyad level trustworthiness (average)	HLM	60	Cross-sectional
Stevens et al. (2015)	Mutual	Interorganisational (Car manufacturers & suppliers)	Dyad level trust	Qualitative	2	Longitudinal (12)
Wang et al. (2022)	Mutual	Interorganisational (buyers and suppliers)	Dyad level trust (average)	OLS regression	239	Longitudinal (2)

(continued)

Table 4.2

Dyadic Trust Empirical Studies since 2014* (continued)

Author(s)	Dyadic Approach	Sample	Trust Conceptualisation	Analysis	#Dyads	Timeframe (Timepoints)
Ahmad et al. (2022)	Asymmetry	Mergers & Acquisitions	Generalised trust (by country)	OLS regression	21,468	Cross-sectional
Brattstrom et al. (2019)	Asymmetry	Interorganisational (multinational)	Trustworthiness (integrity)	Qualitative	1	Longitudinal (12)
Carter & Mossholder (2015)	Asymmetry	Hospitality organization (supervisors and subordinates)	Relationship between individual-level trust	Polynomial regression	96	Cross-sectional
Kim et al. (2018)	Asymmetry	Restaurant (supervisors and subordinates)	Relationship between individual-level trust	HLM, Polynomial regression	247	Cross-sectional
Methot & Cole (2021)	Asymmetry	Undergraduate students	Dyad level trust (difference score)	SRM	930	Longitudinal (3)
Panda et al., 2020	Asymmetry	Venture Capitalists and Entrepreneurs	Dyad level trust and trustworthiness (comparison)	Qualitative	10	Cross-sectional
Vanpoucke et al. (2022)	Asymmetry	Interorganisational (buyers and suppliers)	Dyad level trust (average, difference score) Post hoc relationship between individual-level trust	Hierarchical regression, Polynomial regression (post hoc)	103	Cross-sectional
Villena & Craighead (2017)	Asymmetry	Interorganisational (buyers and suppliers)	Dyad level trust item within relational capital factor (average, difference score) Post hoc relationship between individual-level trust	Hierarchical regression, Polynomial regression (post hoc)	106	Cross-sectional
Wang et al. (2015)	Asymmetry	Interorganisational (Large organisations and SMEs)	Dyad level trust (comparison)	Qualitative	5	Cross-sectional
Wang et al. (2023)	Asymmetry	Interorganisational (buyers and suppliers)	Relationship between individual-level trust	Polynomial regression	162	Cross-sectional
Wang et al. (2020)	Asymmetry	Interorganisational (buyers and suppliers)	Dyad level trust (difference score)	SUR	134	Cross-sectional

Note: APIM = actor-partner interdependence model; HLM = hierarchical linear modelling; LMEM = linear mixed-effects model; MMSA = multivariate multilevel survival analysis; OLS = ordinary least squares; SEM = structural equation modelling; SRM = social relations model; SUR = seemingly unrelated regression.
* Dyadic trust articles prior to 2014 can be found in Korsgaard et al. (2015)

As can be seen in Table 4.1, the conceptualisation and analysis of dyadic trust varies. Following the method of classification adopted by Korsgaard et al. (2015) and Tomlinson et al. (2009), studies are categorised as reciprocal, mutual, or asymmetric. Reciprocal trust studies examine the individual-level trust of both parties within a dyad, where each party is both a trustor and a trustee, and both parties have iterative influence on each other (Serva et al., 2005). These studies do not assume that trust is reciprocated at equal levels or converges within the dyad, and they retain individual-level measures of trust. In contrast, mutual trust studies treat trust as an emergent property of the dyad, where both parties are presumed to have a shared perception of the trust they have in each other. The focus of mutual trust studies is not the degree of trust convergence within the dyad, but rather the antecedents and outcomes of shared trust. In these studies, a single dyadic-level measure of trust is typically operationalised as an aggregation of the two individual measures. Finally, asymmetric trust studies examine the degree to which the trust both parties have in each converges (Tomlinson et al., 2009). Unlike mutual trust which presumes a shared level of trust, asymmetric trust studies examine the dispersion of trust within the dyad, ranging from high levels of convergence to low levels of convergence. This is typically examined in conjunction with the mean level of trust itself, as a high level of trust convergence can occur on a range of high to low mean levels of trust. In asymmetric trust studies, the dispersion of trust in a dyad can be analysed using a variety of methods, typically creating difference scores or statistical measures of dispersion, or using polynomial regression and response surface analysis.

Several research trends are illustrated by Table 4.2. Firstly, the amount of dyadic trust studies remains at a low level but is increasing. The systematic review by Korsgaard et al. (2015) found 35 articles on dyadic trust spanning a 32-year period between 1983 and 2014 (one additional article was dated 1958). This review found 34 additional studies in the intervening 10 years (2014-2023). This reflects a modest growing interest in conceptualising and examining trust from a relational and dyadic perspective. The growth could also be

enabled by advances in statistical tools and techniques for dyadic data analysis. Secondly, a substantial number of dyadic trust studies continue to examine trust on a reciprocal basis at the individual level of analysis. Korsgaard et al. (2015) found 13 reciprocal trust studies. This review found an additional 14 reciprocal trust studies, providing evidence that this analytical approach continues to be useful to the field of trust research. Third, the trend towards longitudinal trust analysis is emerging slowly in dyadic trust studies. Three studies prior to 2015 studied dyadic trust longitudinally. This review found an additional 10 studies examining trust both dyadically and longitudinally. Finally, the number of dyadic studies assuming a mutual level of trust has dropped somewhat, with this review finding nine additional studies to add to the 15 found prior to 2015. In contrast, studies of trust asymmetry continue, with an additional 11 studies found since 2014 to add to the seven studies found prior to this. The relative increase in studies of trust asymmetry rather than studies of mutual trust may reflect an emerging consensus in the trust literature that relationship parties can differ in their levels of trust (Dirks & de Jong, 2022). In the current study, trust is conceptualised as asymmetric rather than mutual.

In the following sections, the theory and empirical research on each of these three major approaches to dyadic trust analysis (reciprocal, longitudinal, asymmetry) are reviewed and discussed in detail.

4.4   Reciprocal Trust – Dyadic Patterns of Influence

A fundamental feature of the concept of reciprocal trust is that within a relationship, the trust of party A towards party B influences in turn the trust of party B towards party A. In this conceptualisation, trust is a dynamic and iterative process between two people. It implies that each party is at once both a trustor and a trustee, and through a series of two-way exchanges, they have an iterative influence on each other.

Empirical studies have demonstrated a modest but significant positive association between the trust each party has for the other party in the relationship dyad. For example, a study on trust within intimate relationships found significant positive correlations between the trust male and female partners have for each other (Fitzpatrick & Lafontaine, 2017; $r = .20$). In organisational settings, studies have found trust between managers/supervisors and subordinates to be significantly correlated (Brower et al., 2009; $r = .16$; Martinez-Tur et al., 2020; $r = .35$; Seppälä et al., 2011; $r = .22$). Trust between organisational coworkers has also been found to have significant positive correlations (Ferrin et al., 2006; $r = .25$; Yakovleva et al., 2010; $r = .24$). At interorganisational level, trust between buyers and suppliers has been shown to have a significant positive correlation (McEvily et al., 2017; $r = .35$). Thus, correlation analysis from studies conducted in a variety of settings provides preliminary evidence that the influence of one party's trust on the other exists at modest levels and to varying degrees depending on the situation and the context. However, the intricacies involved in how these bilateral patterns of influence come about remain relatively unexplored, and this study aims to shed some light on these dyadic processes.

Trust theory and empirical research into this aspect of dyadic trust concentrates on examining the antecedents and consequences of these two-way exchanges and the impact on each party in the trusting relationship. This section reviews the theory and empirical research related to reciprocal trust and develops a set of hypotheses regarding reciprocal trust to be examined in the current study.

4.4.1 Reciprocal Trust Theory

One of the earliest theorists to explicitly identify this dyadic reciprocity was Morton Deutsch (1958), who described it as a "complementary social trust" where each party is aware of the intent and the trust of the other, and each party is concerned for the welfare of

the other. Social exchange theory (Blau, 1964) is the most frequently proposed theory to explain the need for trust and its development over time. According to social exchange theory, inexact discretionary obligations between two people are reinforced by repeated voluntary exchanges, but carry the risk of non-reciprocation and cannot be guaranteed, leading to the need for trust (social exchange theory is described in more detail in section 2.3.1 of Chapter 2). In this theory, equivalence of trust between the two parties is not a requirement. Indeed, a level of imbalance can be interpreted as a desirable signal of commitment to a long-term relationship, and a willingness to remain indebted for a period of time in the positive expectation of future reciprocity to address the imbalance. In any case, the focus of reciprocal trust enquiry is on the process of dyadic influence rather than the specific levels of trust in each party, which will be covered later in section 4.6.

Subsequent developmental models of trust provided more detail than social exchange theory by expanding on the reciprocal nature of trust. The dynamic spiral model of trust reinforcement proposed by Zand (1972) shows the interaction of two people with similar intentions and expectations regarding trust. This model proposes that trust between two individuals develops through an iterative give-and-take process involving trustworthiness expectations and trust behaviours (information disclosure, acceptance of influence, reduction in controls) of both parties in relation to each other. In this model, high-trust reinforces high-trust among partners, and low-trust reinforces low-trust among partners. Reciprocal cycles of cooperation have also been explained by experimental game theory whereby anticipation of future interactions and the continuance of a relationship encourages higher levels of cooperation (Axelrod, 1984).

Stage models of trust development (Lewicki et al., 2006) can also explain the dyadic nature of trust. The stage model of interorganisational trust proposed by Shapiro et al. (1992) emphasises that trust and risk exist for both parties simultaneously. In this model, repeated interactions between the parties move both of them through stages of deterrence-based trust

(based on individual costs of discontinuing the relationship), knowledge-based trust (based on predictability of reciprocation) and identification-based trust (based on joint interests and understanding). Similarly, in the stages of trust development outlined by Lewicki and Bunker (1996), both parties move from calculus-based trust (based on individual costs and benefits) to knowledge-based trust (based on familiarity and predictability) and on to identification-based trust (based on deep connection and shared values). In this model, as each party gets to know each other better through repeated interactions, their connection become more established, and they learn to trust each other. These deeper forms of trust are similar to the concept of relational trust proposed by Rousseau et al. (1998). Relational trust moves beyond matters of reliability and dependability into closer emotional attachments based upon reciprocated care and concern (McAllister, 1995). In this conceptualisation, interdependence between the parties increases and the relationship is characterised by a sense of shared identity and the trust of each party in the other.

Finally, reciprocal trust can be considered within the broader relationship theory of interdependence (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). This theory proposes reciprocal interdependence as the defining feature of a relationship and comprehensively describes how individual, dyadic, and situational characteristics and interactions influence the development of the relationship. At its heart, interdependence theory explains how the two people in a relationship influence each other's experiences and outcomes. It has been used in a meta-analysis to explain the fundamentally dyadic nature of the relationship between trust and cooperation (Balliet & Van Lange, 2013). Interdependence theory highlights that trust is not simply a unidimensional phenomenon in the mind of the trustor, but a bidimensional phenomenon where the trustee's trust perceptions and trust behaviours play a vital role. Interdependence theory is described in more detail in section 2.3.2 of Chapter 2.

4.4.2 Individual Differences and Reciprocal Trust

Early trust theory (Rotter, 1967) suggested that those high in trust propensity would not only trust others but would also be viewed as trustworthy by others. However, the results of a limited number of investigations into the reciprocal effects of trust propensity are mixed. In a study of colocated and virtual coworkers, Yakovleva et al. (2010) found that the trust propensity of the trustor was not only related to the trust of the trustor but also to the trust of the trustee, that is, the other party in the dyadic relationship. However, in a two-study experimental negotiation exercise, Yao et al. (2017) found conflicting evidence for the dyadic effects of trust propensity. In their first study with students using a context-specific measure of trust propensity, both the negotiator's trust propensity and the counterparty's trust propensity influenced the negotiator's trust development, indicating reciprocal effects. In contrast, in their second study with business executives and a context-free measure of trust propensity, the counterparty's trust propensity did not influence the negotiators trust development, indicating no reciprocal effects for trust propensity.

A subsequent experimental negotiation study with senior managers (Yao et al., 2021) confirmed that a negotiator's own trust propensity but not the counterparty's trust propensity predicts the negotiator's subsequent negotiation behaviours focused on joint gains, thus revealing no dyadic effect of trust propensity. In a similar dyadic study, Yao & Storme (2021) showed that trust propensity influenced only the initial trust of the trustor, not the trustee, and did not influence trust over time. These temporal findings are supported by the findings of one-sided empirical trust research where the influence of trust propensity reduces over time as the parties get to know each other and the situational context (Colquitt et al., 2007; van der Werff & Buckley, 2017). The results of empirical research do not provide robust evidence that trust propensity plays a significant role in reciprocal trust dynamics.

A small number of studies have explored other individual difference antecedents to reciprocal trust. A dyadic study on attachment orientation and trust in intimate interpersonal relationships (Fitzpatrick & Lafointaine, 2017) showed reciprocal effects between partners, where female trust was influenced by both their own attachment avoidance orientation and that of their partner. An experimental dyadic study of negotiation (Campagna et al., 2016) found that a negotiator's emotional misrepresentation (i.e., feigned anger in order to gain advantage) backfires and results in genuine anger and reduced trust in both the negotiator and their counterpart. A dyadic study of student project teams (Naber et al., 2018) showed that individual differences (including general mental ability, knowledge, agreeableness, conscientiousness, and openness to experience) influence both trusting others and being trusted. Accordingly, there is some limited evidence that reciprocal trust can be influenced by the individual characteristics of the two parties, although theory and research is underdeveloped in this area.

4.4.3   Relational Dimensions of Reciprocal Trust

In empirical studies, reciprocation of trust is often operationalised as cooperative behaviour (Lewicki et al., 2006). For example, in a business simulation study involving five exchange cycles, Ferrin et al. (2008) demonstrated that trustworthiness perceptions of one party in one round predicted the trustworthiness perceptions of the other party in the next round, both directly and indirectly through cooperative behaviour. Furthermore, this study found that the cooperative behaviour of one party in one round predicted the cooperative behaviour of the other party in the next round, both directly and indirectly through trustworthiness perceptions. Similarly, in a computer-mediated trust game involving five exchange rounds, Alarcon et al. (2018) found that trustworthiness perceptions predicted reciprocated cooperative trust behaviours, which subsequently resulted in higher

trustworthiness perceptions in a reciprocal gain spiral pattern. In a negotiation simulation with business executives, Yao et al. (2017) provided evidence for dyadic effects of cooperative negotiation behaviour where both the negotiator's behaviour and the behaviour of the counterparty influenced the negotiator's trust development. Reciprocal and spiral models of trust have also been illustrated in field studies. For example, in a daily study of established coworkers over five days, Halbesleben and Wheeler (2015) found that cooperation received predicted perceptions of support and trust, and that these perceptions and behaviours increased over time based on the unique reciprocal patterns within each dyadic relationship. These examples of the trust-cooperation spiral model illustrate the intricate reciprocal process of trust over time that is fundamentally affected by the perceptions and behaviour of both parties.

In a difference approach to the spiral model over time, a dyadic study of coworkers in a large, geographically distributed product development team by Yakovleva et al. (2010) examined the reciprocal influences of trustor's variables on themselves (actor effect) and on the trustee (partner effect) simultaneously in a dyadic analysis model (Kenny et al., 2006). In relation to the effects of trustworthiness on trust, this study found direct actor effects for all three trustworthiness perceptions (ability, benevolence, integrity) but found partner effects for only benevolence and integrity. This can be explained by the strong interpersonal attributes of benevolence and integrity, whereas ability is thought to be less interpersonal and more individual in nature, thus less likely to demonstrate reciprocal effects. However, due to the small sample size of this study, the reciprocal effects of the three factors of trustworthiness on trust were estimated separately rather than simultaneously, so they may have been over estimated.

The same study (Yakovleva et al., 2010) also examined the reciprocal effects of trust on interpersonal citizenship behaviours received and found actor effects but not partner effects, which was unexpected. Previous studies, while not dyadic, have demonstrated the

reciprocal nature of trust and ICB. For example, perceptions of manager trustworthiness have been found to be positively related to employee ICBs (Chiaburu & Lim, 2008; Korsgaard et al., 2002).

Other behaviours besides cooperation influence reciprocal trust. For example, in a study of newly formed interacting student project teams observed at four timepoints (Serva et al., 2005), a range of risk-taking behaviours exhibited by one team were found to predict the partner team's trustworthiness perceptions and subsequent trust and risk-taking behaviours. In this study, manager risk-taking behaviours included monitoring progress and delegating tasks, whereas team risk-taking behaviours included formalising communications and change management. In a similar supervisor-subordinate context, Seppälä et al. (2011) found that supervisor trust in a subordinate influences subordinate trust in the supervisor through supervisor trust behaviours (granting increased autonomy to the subordinate) and a resulting heightened sense of power in the subordinate.

Reciprocal trust has also been studied in relation to attitudinal outcomes. For example, a study by Fitzpatrick and Lafointaine (2017) showed that female relationship satisfaction in intimate relationships is influenced by both their trust in their partner and their partner's trust in them. In an organisational context, Cheung at al. (2017) found that subordinate perceptions of psychological contract fulfilment are influenced not only by their own trust in their supervisor, but also by their supervisor's trust in them.

In summary, cooperative behaviours are the most frequently studied outcomes of trust across a variety of situations, and there is general agreement that reciprocal trust is grounded in the iterative influence of trust on cooperation and the influence of cooperation on trust, across two parties in a dyadic relationship (Korsgaard, 2018). However, the need for research to explicitly distinguish between the trust and cooperation of each party in a relationship in order to better understand the development of trust has been highlighted (Ferrin et al., 2007). In addition, dyadic empirical analysis remains uncommon in this area

(Korsgaard, 2018; Korsgaard et al., 2015) and has been hampered by small sample sizes and methodological limitations (e.g., Yakovleva et al., 2010).

4.4.4 Reciprocal Trust Hypotheses

Hypothesis 1 considers the reciprocal effects of trustworthiness on trust. In a dyadic extension of the integrative ABI model of organisational trust (Mayer et al., 1995; Schoorman et al., 2007), it is proposed that the trustworthiness perceptions of a dyadic member influence both their own trust intentions (actor effect) and the trust intentions of their partner the trustee (partner effect). This builds on the work of early trust theorists (Deutsch, 1958; Zand, 1972) and on theories of social exchange (Blau, 1964) and the norm of reciprocity (Gouldner, 1960) which conceptualised trust as inherently a two-way process, reinforced by reciprocal patterns of influence. It proposes a process model of trust that applies key components of interdependence theory (Kelley & Thibaut, 1978; Van Lange & Balliet, 2015) by covering the interaction of both people in a given situation and emphasising the psychological basis of these interactions. The specific context of this study is two interdependent top management team members who are in a trusting relationship with each other. It expands the empirical work of Yakovleva et al., 2010) by defining the contextual and situational aspect of relational interdependence as two forms of trust, reliance-based trust and disclosure-based trust (Gillespie, 2003). By examining the interactive influences of both parties on each other, it gives prominence to trust as a relational construct (Rousseau et al., 1998) that grows from two-way relational bonds over time (McAllister, 1995).

The effect of an actor's perception of a partner's trustworthiness on the actor's trust in the partner (actor effect) is well established by trust theory (Mayer et al., 1995; Schoorman et al., 2007) and by extensive empirical research (Colquitt et al., 2007). However, the mechanisms by which an actor's perception of a partner's trustworthiness

leads to the partner's trust in the actor (partner effect) are less examined. Trust theory can

offer several explanations for how this effect comes about, which are illustrated in Figure

4.1 below.

Figure 4.1

Potential Mediators between Trustworthiness and Trust (Partner)
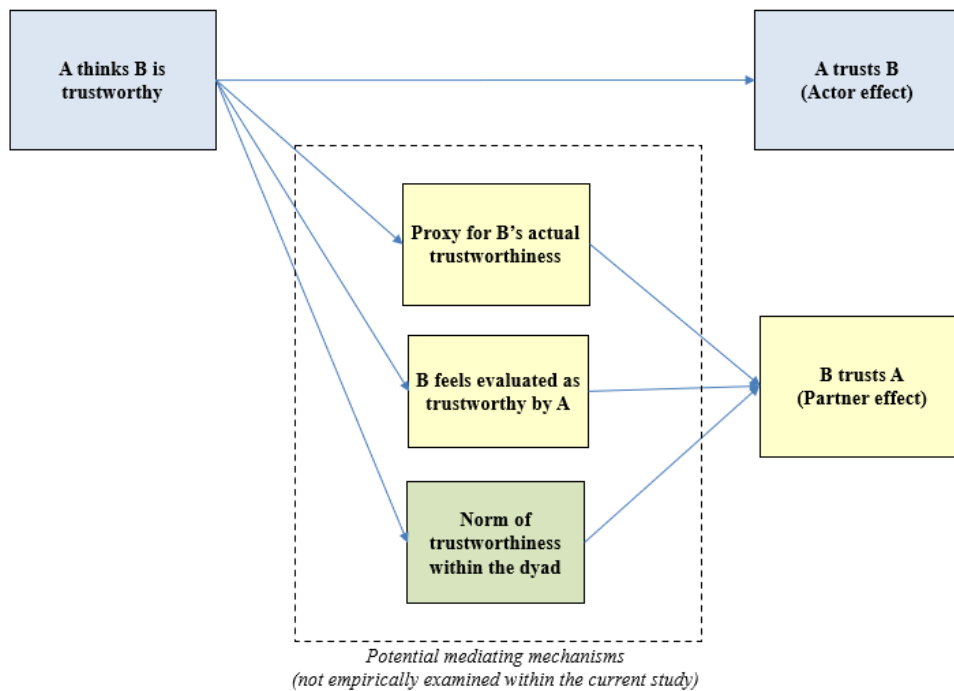
Firstly, trustworthiness perceptions of the partner by the actor could be considered as a proxy for the actual trustworthiness of the partner. Trust theory suggests that the influence of the trustee on trustor perceptions of trustworthiness increases over time as the relationship develops and the trustee has opportunities to demonstrate their trustworthiness (Lewicki & Bunker, 1995; Rousseau et al., 1998). According, this should be especially true in established relationships such as the current sample, as trustworthiness perceptions have been shown to become increasingly accurate over time, arising from a high degree of certainly on the part of the trustor who has been able to gather evidence of trustworthiness (Holtz et al., 2020). Jones & Shah (2016) also provide empirical support for this view by showing that initial trustworthiness perceptions are primarily influenced by the trustor themselves, but this influence declines over time as the relationship becomes established and the influence of the trustee grows stronger. Furthermore, this proxy measurement of actual trustworthiness should have a direct influence on the trust intentions of the trustee, as trust theory suggests that trustworthy people are not only trusted by others, they also are more trusting themselves (Deutsch, 1958; Whitener et al., 1998). Trustworthy individuals value and prioritise relationships and have high expectations of reciprocity, hence they tend to trust others as well as being trusted themselves (Rotter, 1967, 1971).

Secondly, perceptions of trustworthiness by the actor of the partner could lead the partner to feeling evaluated as trustworthy by the actor. Felt trustworthiness (Lester & Brower, 2003) refers to the extent to which a trustee perceives that a trustor evaluates them as trustworthy. The trustee makes favourable attributions about the trustor's trustworthiness evaluations as the relationship develops. Felt trustworthiness, similar to the concept of felt trust (Baer et al., 2015, 2021; Brower et al., 2009; Lau et al., 2014) can lead to positive self-evaluations and a sense of duty to fulfil the ability, benevolence, and integrity expectations of the trustor, resulting in an internalisation of these ethical principles and standards of behaviour. In this sense, social exchange is not simply a pattern

of behaviour, but also a moral obligation to respond to the reasonable expectations of another, even if no exchange has taken place (Gouldner, 1960). In other words, felt trustworthiness can trigger sense of responsibility to live up to the trustor's interpersonal confidence. Experimental research has shown that a sense of interpersonal responsibility can motivate trustworthiness, especially benevolence and integrity forms of trustworthiness (Levine et al., 2018).

Thirdly, perceptions of trustworthiness by the actor of the partner could lead to the establishment of a norm of trustworthiness evaluations within the dyad. Early trust theory suggested that cooperative social exchanges produce both trusting and trustworthy behaviour in both parties (Deutsch, 1958). Relational trust theory (Rousseau et al., 1998) suggests that established relationships are characterised by a shared sense of identity. This shared identity can extend to a shared sense of trustworthiness, where the trustworthiness evaluation by one party influences the evaluation by the other party and a shared norm of trustworthiness emerges, in particular common values and mutual care and concern. While empirical analysis on shared influences within a dyad is uncommon, Jones and Shah (2016) have shown that benevolence and integrity perceptions become modestly but increasingly influenced by the joint and shared effects of both the trustor and the trustee. Trustworthiness has been proposed as an underlying assumption and general moral expectation of all normal situations, and the platform from which a cognitive leap of faith is launched, beyond the trustworthiness expectations themselves (Lewis & Weigert, 1985; Möllering, 2001). Furthermore, positive anchoring events early in a relationship can inspire strong identification with a trust partner and lead to positive nonreciprocal exchange relationships, based more on the norms of trustworthiness evaluations and future expectations than on actual exchange behaviour (Ballinger & Rockman, 2010).

Although an empirical examination of these mediating variables is outside the scope of the current study, they can explain in more detail the actual mechanism by which

an individual actor's perception of a partner's trustworthiness can lead to the trust intentions of their dyad partner towards them. Thus, the current study hypothesises that perceptions of trustworthiness will influence both own trust intentions (actor effect) and the trust intentions of the other party (partner effect).

Hypothesis 1. An actor's perception of a partner's trustworthiness (ability, benevolence, integrity) influences both actor and partner trust intentions (reliance, disclosure).

As trust theory suggests that some aspects of trustworthiness and trust are more relational and reciprocal than others (Colquitt et al., 2011; Gillespie, 2003; Schoorman et al., 2007), the detailed patterns of influence between the sub-factors of trustworthiness and trust may differ. Consequently, sub-hypotheses are developed to estimate the effects of each of the three trustworthiness factors (ability, benevolence, integrity) on each of the two forms of trust, reliance and disclosure (Gillespie, 2003).

Firstly, the reciprocal influence of trustworthiness ability perceptions on trust is considered. Trustworthiness ability perceptions and trust reliance intentions are both considered strongly cognitive in nature (Gillespie, 2003; Schoorman et al., 2007) and the link between the two has been demonstrated empirically (Tomlinson et al., 2020; van der Werff & Buckley, 2017). Thus, an actor effect is expected for trustworthiness ability perceptions and trust reliance (H1a). However, previous empirical research has found no reciprocal effects for ability (Yakovleva et al., 2010). Ability is not strongly relational, as the ability of one partner is not necessarily related to the ability of another partner. This may be especially true in non-voluntary work situations, where individuals with different types and levels of competence can be assigned to work together. The expertise of party A

influences the willingness of party B to reply upon them, but does not necessarily influence the willingness of party A to rely on party B which depends predominantly on the expertise of party B. For this reason, no reciprocal partner effects are expected for trustworthiness ability perceptions and trust reliance.

In contrast to trust reliance, trust disclosure is considered more affective and relational in nature (Gillespie, 2003). Previous empirical research has found ability to have a weaker influence on trust disclosure than that of benevolence or integrity (Tomlinson et al., 2020) or no significant relationship at all (van der Werff & Buckley, 2017). Thus, the expertise of party A should not significantly influence the willingness of party B to disclose sensitive information to them. Furthermore, there is no theoretical or practical reason to think that the expertise of party A would influence the willingness of party A to disclose sensitive information to party B. Thus, neither actor nor partner effects are expected for trustworthiness ability perceptions and trust disclosure intentions.

Hypothesis 1a. An actor's perception of a partner's trustworthiness (ability) influences actor trust (reliance).

Secondly, the reciprocal influence of trustworthiness benevolence perceptions on trust is explored. Trustworthiness benevolence perceptions are considered to be more affective in nature (Colquitt et al., 2011). However, empirical research has found benevolence influences both trust reliance and trust disclosure, although the link to trust disclosure appears to be stronger (Tomlinson et al., 2020; van der Werff & Buckley, 2017). Benevolence is also considered strongly relational, and empirical research has found reciprocal effects for benevolence (Yakovleva et al., 2010). Trust theory suggests that concern for others is an antecedent to both the receipt of trust (Mayer et al., 1995; McAllister,

1995) and to the initiation of trust (Whitener et al., 1998). Benevolent individuals can be less focused on self-interest and more focused on relationships which encourages them to both communicate their own trustworthy character and also to trust others (Whitener et al., 1998). Thus, actor and reciprocal partner effects are expected for the influence of trustworthiness benevolence perceptions on both trust reliance (H1b) and trust disclosure intentions (H1c).

Hypothesis 1b. An actor's perception of a partner's trustworthiness (benevolence) influences both actor trust (reliance) and partner trust (reliance).

Hypothesis 1c. An actor's perception of a partner's trustworthiness (benevolence) influences both actor trust (disclosure) and partner trust (disclosure).

Thirdly, the reciprocal influence of trustworthiness integrity perceptions on trust is examined. Trustworthiness integrity perceptions are considered to be more cognitive in nature (Colquitt et al., 2011; Schoorman et al., 2007). However, recent research suggests that integrity has both cognitive elements (behavioural integrity) and affective elements (values congruence) (Tomlinson et al., 2020). The concept of integrity from Mayer et al. (1995) adopted in this research encompasses both of these in a unidimensional measure.

Empirical research on the influence of integrity on trust reliance and trust disclosure is mixed. For example, Tomlinson et al. (2020) found that behavioural integrity and values congruence both influenced reliance and disclosure, whereas Moorman et al. (2018) reported that behavioural integrity influenced reliance solely and values congruence influenced disclosure solely. In contrast, van der Werff & Buckley (2017) found weak evidence for the impact of the broader concept of integrity on reliance and no impact on disclosure. Previous

empirical research has found reciprocal effects for the broader concept of integrity on a single measure of trust (Yakovleva et al., 2010).

Trust theory suggests that trustworthy people are not only trusted by others, but also inclined to trust others more, as they have strong expectations of reciprocity (Rotter, 1967, 1971). This may be especially true for integrity, as an individual's ethical values and promise-keeping behaviours may not only elicit trust from others, but also encourage the initiation of trust by the trustworthy person themselves (Whitener et al., 1998). It is thus anticipated that integrity perceptions will demonstrate actor effects and partner effects for both trust reliance (H1d) and trust disclosure (H1e).

Hypothesis 1d. An actor's perception of a partner's trustworthiness (integrity) influences both actor trust (reliance) and partner trust (reliance).

Hypothesis 1e. An actor's perception of a partner's trustworthiness (integrity) influences both actor trust (disclosure) and partner trust (disclosure).

Next, hypothesis 2 considers the reciprocal effects of trust intentions on trust behaviour, specifically interpersonal citizenship behaviour (ICB) which is a commonly studied outcome of interpersonal trust (Korsgaard et al., 2015; Korsgaard, 2018). Trust has been associated with both the giving of help (e.g., McAllister, 1995; Brower et al., 2009) and the receipt of help (e.g., de Jong et al., 2007; Ferrin et al., 2006), depending on the context. Both the giving of help and the receipt of help constitute reciprocal collaborative behaviours which form the foundation of social exchange theory (Blau, 1964), the norm of reciprocity (Gouldner, 1960), and interdependence theory (Kelley & Thibaut, 1978; Van

Lange & Balliet, 2015). Furthermore, motivation to reciprocate in the form of ICB is considered to be based more on relational factors than on dispositional factors (Bowler & Brass, 2006).

Trust theory explicitly proposes that own (actor) and other (partner) trust influences own cooperation (Ferrin et al., 2007). However, these reciprocal effects are rarely tested empirically in a simultaneous dyadic context. One study (Yakovleva et al., 2010) did not find evidence of partner effects between a one-factor conceptualisation of trust and a one-factor conceptualisation of ICB. However, the current study anticipates a bidirectional influence of trust on ICB based on interpersonal relationship theory (Blau, 1964; Gouldner, 1960; Kelley & Thibaut, 1978) and trust theory (Ferrin et al., 2007). If a trustor is willing to make themselves vulnerable to a trustee in the expectation of a collaborative response, it is expected that they would feel an obligation to respond in a similar manner to the trustee. Accordingly, it is expected that the trust intentions of a trustor influence both the help they receive from the trustee (actor effect) and the help the trustee receives from them (partner effect). The hypotheses reflect the two-factor concept of trust intentions (Behavioural Trust Inventory; BTI; Gillespie, 2003) and the two-factor concept of interpersonal citizenship behaviour (ICB; Settoon & Mossholder, 2002) which have been described in detail in Chapter 3.

Hypothesis 2. An actor's trust intentions (reliance, disclosure) towards a partner influence both actor and partner perceptions of interpersonal citizenship behaviour received (task-focused ICB and person-focused ICB).

Sub-hypotheses are proposed to estimate the effect of each element of trust on each element of ICB. As task-focused ICB and person-focused ICB are considered

complementary forms of ICB and have been found to have similar antecedents (Settoon & Mossholder, 2002), actor and partner effects for both trust reliance and trust disclosure are expected for both task-focused and person-focused ICB.

Hypothesis 2a. An actor's trust (reliance) towards a partner influences both actor and partner perceptions of interpersonal citizenship behaviour received (task-focused)

Hypothesis 2b. An actor's trust (reliance) towards a partner influences both actor and partner perceptions of interpersonal citizenship behaviour received (person-focused)

Hypothesis 2c. An actor's trust (disclosure) towards a partner influences both actor and partner perceptions of interpersonal citizenship behaviour received (task-focused)

Hypothesis 2d. An actor's trust (disclosure) towards a partner influences both actor and partner perceptions of interpersonal citizenship behaviour received (person-focused)

4.5   Trust Development Over Time

Trust as an ongoing dynamic process of development over time is an inherent feature of most trust conceptualisations (e.g., Kramer & Lewicki, 2010; Lewicki & Bunker, 1996; Lewicki et al., 2006; Mayer et al., 1995; McAllister, 1995; Rousseau et al., 1998). Trust can

grow, stabilise, fluctuate, or decline over time within a relationship, influenced by individual, relational, and situational factors (Korsgaard et al., 2018). Yet empirical longitudinal trust research is uncommon, although the number of studies has grown over the last decade. Empirical longitudinal trust studies that also undertake a dyadic level of analysis are even less common, most likely due to the practical difficulties of collecting data both dyadically and at repeated timepoints.

This section reviews the theory and empirical research related to trust development and change over time. As an explicit dyadic perspective in this area is limited, the section draws heavily on studies of single-sided trust development, although it emphasises the relational features as much as possible. The section concludes with developing a set of hypotheses regarding dyadic trust change to be examined in the current study.

4.5.1 Models of Trust Development

Transformational models of trust development explain the development of trust over time through a series of three stages (Lewicki et al., 2006). These theories were introduced in section 4.4.1 to explain the dyadic nature of trust which is fundamentally an emergent process between two people. Early stages are thought to be motivated by cost-benefit calculations, mid stages by deeper knowledge of the trustee, and final stages by a shared sense of identification between the parties. Stage models imply that the concept of trust itself is transformed in some way over time, and in a particular sequence (Lewicki et al., 2006). While some empirical research has shown that the bases of trust change over time, the fundamental components of the trust process seem to remain applicable across contexts (Dietz, 2011). Furthermore, the order of the stages does not seem to be applicable in all cases (e.g., van der Werff & Buckley, 2017). Nevertheless, stage models of trust development have

helped to bring an understanding of the dynamic nature of trust development over time and the gradual development of a deeper form of trust in stable relationships of long duration.

In contrast to stage models of trust development, an interactionist model of trust development proposed by Jones and George (1998) focuses less on the determinants that lead to different types of trust, and more on trust as a dynamic and relational experience evolving over time. In this model, trust can fluctuate between states of conditional trust and unconditional trust, influenced as much by values, attitudes, moods and emotions as by more cognitive knowledge-based calculations. Conditional trust involves a suspension of distrust beliefs in order to reap the likely benefits of trust and is predominantly based on individual knowledge. In contrast, the dyadic nature of trust is emphasised in this model as it highlights that unconditional trust emerges through shared interpretive schemes and reciprocity between the parties over time. However, rather than representing incremental stages, this model proposes that it is possible for unconditional trust to change into conditional trust or even distrust over time. While unconditional trust represents a deeper form of trust, it takes time and effort to develop and maintain, and many individuals and organisations may be content to operate at a level of unconditional trust.

4.5.2 Initial Levels of Trust

While many theories suggest that trust starts from a zero basis and develops gradually over time, empirical field research has shown than initial levels of trust can have a higher starting baseline (e.g., Jarvenpaa et al., 1998). In addition, it has been demonstrated that trust development is not linear, with faster rates of development in the initial stages (e.g., van der Werff et al., 2017). In explanation, some theorists have described how people in new organisational situations can start relationships with some preliminary levels of trust in each other, despite not yet knowing each other (Lewicki et al., 2006).

Meyerson et al. (1996) proposed that 'swift trust' can already be in place at the very start of temporary work teams which have specific goals and limited timeframes. Temporary work teams have become common in the world of work today as a result of sub-contracting, flexible workforces, and rising interdependence and teamwork within organisations. In these cases, arising from a necessity to develop working relationships very quickly, individuals can presume a form of trust in advance of meeting their new colleagues. Swift trust is a form of cognitive trust influenced by the social environment of a specific organisation which can include the structures, rules, procedures, role descriptions, and prior reputations of both the organisation and specific individuals. It has similarities with the concept of presumptive trust (Kramer & Lewicki, 2010) which is founded on shared understanding of what membership of an organisation means and on generalised social expectations.

More recently, Wildman et al. (2012) proposed an integrated theoretical framework to describe how trust develops in swift starting actions teams based on cognitive, affective, behavioural, and contextual perspectives. In particular, this framework emphasises the influence of affective processes and explicitly proposes stages of trust development over time in even the short duration of temporary teams. Rapid formation of teams has become a feature of many knowledge-based organisations today, and in consequence situations of swift trust may be increasingly applicable in comparison to more gradual trust development in more stable and structured organisational settings (Blomqvist & Cook, 2018).

In a similar conceptualisation but not limited to temporary teams, McKnight et al. (1998) proposed that initial trust within organisations is not based on any perceptions of the specific trustee but on individual trust propensity and perceptions of institutional cues. This form of institution-based trust is similar to the concept of deterrence-based trust (Shapiro et al., 1992). It includes trust based on structural assurances such as promises, contracts, regulations, and guarantees, and trust based on beliefs of situational normality, that is, perceptions that everything appears to be in proper order and appropriate to the context.

More recently, researchers have suggested that heuristic processing can play a important part in the formation of initial trust (Baer & Colquitt, 2018; Lewicki & Brinsfield, 2011; McEvily, 2011). Heuristics describe the activation of judgmental rules that have been learned in prior experiences (Tversky & Kahneman, 1973). Unlike swift trust (Meyerson et al., 1996) or presumptive trust (Kramer & Lewicki, 2010) which both arise from calculative, cognitive processing, heuristic-based trust is a less conscious form of evaluation that has more in common with situational normality beliefs proposed by McKnight et al. (1998). For example, experimental research has shown that heuristic processing of facial features can influence initial trustworthiness perceptions and trust levels (e.g., Holtz, 2015; Kong, 2018; Stirrat & Perrett, 2010). However, empirical research into the influence of heuristic processing on trust, in particular interpersonal trust, has been quite limited to date (Baer & Colquitt, 2018; Dirks & de Jong, 2022).

4.5.3 Trustworthiness Perceptions Over Time

When examining established relationships such as those in the current study, an appreciation of the changing bases of trust can be useful. Models of trust development imply that the bases of trust shift over time (Lewicki et al., 2006, Mayer et al., 1995). Stage models (Lewicki & Bunker, 1996; Rousseau et al., 1998) describe initial trust as a cognitive process influenced strongly by the trustors' limited situational perceptions and individual trust propensity, but which moves to more specific trustee influences (trustworthiness perceptions by the trustor) as the relationship develops. Mayer et al. (1995) suggested that the effect of integrity would be most salient early in a relationship, with the effect of benevolence gaining more prominence at later stages.

In recognition of the changing bases of trust, a longitudinal study of newly formed student project teams by Jones and Shah (2016) examined the separate and relative influence

of the trustor, the trustee, and the dyadic relationship on trustworthiness perceptions. The results found the trustor to be the dominant influence at the initial stage of trust formation. While this influence decreased over time, the trustor remained the dominant influence for benevolence perceptions at the later stages. In contrast, the results indicated a significant increase in the influence of the trustee over time, particularly for perceived ability and integrity where the trustee becomes the dominant influence. The results also indicate that the trustee becomes the dominant influence quickest for ability perceptions, followed by integrity perceptions, with benevolence perceptions taking the longest to develop. Compared to the influence of the trustor or the trustee, the influence of the dyad (based on mutual affinity or shared characteristics) is low at both initial and later stages, although it does grow modestly over time. More specifically, while the dyad has very little influence on ability perceptions at any time, the dyad seems to have a growing influence on benevolence and integrity perceptions over time.

Other researchers have examined the changing influence of trustworthiness assessments over time, but results are mixed. Levin et al. (2006) found that trustworthiness assessments were not of significant influence in early or late stages of relationships but were influential in relationships of intermediate duration, whereas a sense of shared perspective became influential in the later stages. In contrast, in a study of temporary virtual teams, initial trusting beliefs have been found to influence trusting beliefs eight weeks later (Crisp & Jarvenpaa, 2013). An earlier study of global virtual teams (Jarvenpaa et al., 1998) found that integrity perceptions were most important and benevolence perceptions were least important in early-stage relationships, but over time, the influence of integrity perceptions continued, the influence of benevolence perceptions grew, and the influence of ability perceptions decreased. However, other research (van der Werff & Buckley, 2017) found ability and benevolence perceptions to be more influential than integrity perceptions at both early and subsequent stages of relationships. Frazier et al. (2016) found ability perceptions to be

important at all relationship stages, but while both benevolence and integrity were important in early relationships, established relationships required only one of them to be present to maintain trust. Campagna et al. (2022) found that initial trustworthiness assessments generally persist overtime although they can be revised in the face of belief-challenging data.

As can be seen, the complexity of the influence of trustworthiness perceptions over time is illustrated by trust theory and empirical research studies. Trustworthiness patterns of influence may vary depending on the maturity and depth of the relationship and are likely to be context specific.

4.5.4 Longitudinal Trust - Empirical Research Review

While empirical research studies that take a longitudinal approach are relatively uncommon, recent years have seen a growing body of evidence in this area, hence there is value in reviewing these studies in detail. This section presents the results of a systematic review of longitudinal trust research (Table 4.3). A similar approach was adopted to that taken for the systematic empirical dyadic trust review that was previously outlined in section 4.3. Title search keywords included "trust*" with "longitudinal", "time", "spiral*", "develop*", and "change".

To be included, an article must have empirically examined a trust variable at three or more time points. In quantitative studies, longitudinal research to effectively study change requires a minimum of three waves of data (Ployhart & Vandenberg, 2010; Ployhart & Ward, 2011). Trust research involving two time points, such as before and after training, is considered insufficient for examining the overall trajectory of change. It cannot reveal non-linear patterns including change plateaus and speed of change (Chan, 1998; Singer & Willett, 2003), although it can give good insights into the impact of interventions and a deeper

understanding of reciprocal trust patterns. Increasing, qualitative studies are also examining trust dynamics at three or more time points.

Studies at all levels of analysis were included (individual, dyad, group, or organisation). Both field studies and experimental studies were included. This search was not constrained in terms of starting year. The earliest paper found to meet the inclusion criteria was Serva et al. (2005). A final list of 31 relevant studies was obtained following examination for inclusion criteria. The results are summarised in Table 4.3.

Table 4.3

Longitudinal Trust Empirical Studies

Author	Sample	Level of Analysis	Analytic Approach	#Sample Size	#Time Points	Notes
Alarcon et al. (2018)	General population (experimental)	Individual & Dyad	SEM (MMSA)	189 individuals 300 dyads	5	Dyadic (Reciprocal)
Alarcon et al. (2019)	Students (experimental)	Individual & Team	SEM (panel analysis)	195 individuals 39 teams	3	
Baer et al. (2018a)	MBA students	Individual	MLM	109 individuals (S1) 119 individuals (S2)	17 (S1) 12 (S2)	
Baer et al. (2022)	MBA alumni (employees)	Individual	MLM	103 individuals	12	
Beggiato et al. (2015)	Car test drivers	Individual	Analysis of variance (mean score over time)	15 individuals	10	
Brattstrom et al. (2019)	Multinational organisation and partner	Dyad	Qualitative	1 case study	12	Dyadic (Mutual)
Buvik et al. (2015)	Construction Industry	Individual	Qualitative	1 case study	12	
Cheng et al. (2016)	Undergraduate students	Individual	Analysis of variance (ANOVA)	46 individuals(S1) Not specified (S2)	7 (S1) 9 (S2)	
Dirks et al. (2021)	Army cadets	Individual	MLM	534 individuals	3	
Dresher et al. (2014)	General population (experimental)	Team	HLM (change over time)	142 teams	3	
Ferrin et al. (2008)	Undergraduate students (experimental)	Individual & Dyad	APIM (panel analysis)	68 individuals (S1) 204 individuals (S2)	6	Dyadic (Reciprocal)
Halbesleben & Wheeler (2015)	Variety of industries (coworkers)	Individual & Dyad	SEM (latent change score)	354 individuals 177 dyads	5	Dyadic (Reciprocal)
Hill et al. (2009)	Undergraduate students (experimental)	Individual	HLM	208 individuals	3	
Högberg et al. (2018)	Interorganisational (Public homecare organisation and private providers)	Individual	Qualitative	1 case study	7 years	
Jones & Shah (2016)	Undergraduate students	Individual & Dyad	SRM	241 individuals	3	
Kaltiainen et al. (2017)	Organisational merger (Civil Service)	Individual	SEM (panel analysis)	622 individuals	3	

Table 4.3

Longitudinal Trust Empirical Studies (continued)

Author	Sample	Level of Analysis	Analytic Approach	#Sample Size	#Time Points	Notes
Karhapää and Savolainen (2018)	Organisational merger (University)	Individual	Qualitative	1 case study	17 years	
Lagenkamp (2022)	General population	Individual	Linear dynamic panel analysis	9954 individuals	12	
Lipponen et al. (2020)	Organisational Merger (Civil Service)	Individual	SEM (change over time)	546 individuals	3	
Methot & Cole (2021)	Undergraduate students	Individual & Dyad	SRM	33 individuals	3	Dyadic (Asymmetry)
PytlikZillig et al. (2017)	Undergraduate students (experimental)	Individual	MLM (change over time)	185 individuals	6	
Schaubroeck et al. (2013)	Organisational newcomers (army)	Individual	SEM (panel analysis)	512 individuals	3	
Serva et al. (2005)	Undergraduate students	Team	Multiple regression	24 teams	4	
Stevens et al. (2015)	Interorganisational (Car manufacturers and suppliers)	Dyad	Qualitative	2 organisations 16 suppliers	12	Dyadic (Mutual)
van Berkel et al. (2019)	Interorganisational (Infrastructure project)	Individual	Qualitative	1 case study	1	
van der Werff & Buckley (2017)	Organisational newcomers (Professional Services)	Individual	SEM (change over time)	193 individuals	4	
van der Werff et al. (2019a)	Organisational newcomers (study 1) Returnees from maternity leave (study 2)	Individual	SEM (change over time)	195 individuals (S1) 247 individuals (S2)	3 (S1) 3 (S2)	
Varoutsa & Scapens, 2015	Interorganisational (Aerospace industry)	Individual	Qualitiative	1 case study	1	
Vogelgesang et al. (2021)	General population	Individual	HLM (change over time)	108 individuals	4	
Wilson et al. (2006)	Undergraduate Students (experimental)	Team	Repeated measures analysis of variance	52 teams	3	
Wilson et al. (2022)	High-tech start-ups Leaders(founders) and followers (newcomers)	Individual and Dyad	Qualitative	8 firms 12 dyads	5	Dyadic (Reciprocal)

Note: APIM = actor-partner interdependence model; ; HLM = hierarchical linear modelling; MLM = Multilevel modelling; MMSA = Multivariate multilevel survival analysis; SEM = structural equation modelling; SRM = social relations model.

Several experimental research studies have examined trust change over time. For example, an online strategy simulation study (Dresher et al., 2014) involving three rounds showed that growth in shared leadership is associated with growth in team trust. In a three-week study on the development of trust and cooperation in virtual versus face-to-face teams, Wilson et al. (2006) found that while trust starts at higher levels in face-to-face teams, virtual teams reach the same levels of trust over time. A computer-mediated strategic decision-making study (Hill et al., 2009) over three timepoints showed that a context of competition (rather than collaboration) combined with electronic communications (rather than face-to-face) leads to lower growth of trust. A computer mediated experimental study of team trust (Alarcon et al., 2019) found that trustworthiness perceptions grew over time and state suspicion declined over time.

A number of field studies have examined change in trust over time using qualitative methods. A longitudinal qualitative study of leader/newcomer pairs in high-tech start-ups (Wilson et al., 2022) highlighted the dyadic and emergent nature of trust over time. A qualitative longitudinal study of interorganisational trust (Stevens et al., 2015) has shown the risks of excessive or insufficient trust, which can become optimal over time through relationship reorientation and recalibration efforts by both parties. Several other case studies examine the changing relationship between interorganisational trust and control mechanisms over time (e.g., Högberg et al., 2018; van Berkel et al., 2019; Varoutsa & Scapens, 2018).

Organisational mergers are the subject of several longitudinal studies of trust. In a qualitative study of a merger between two universities spanning 17 years, Karhapää and Savolainen (2018) demonstrated that trust moves in stages from calculation-based trust to identity-based trust and permeates the organisation at multiple levels including top management, individual, group, and the organisation. A three-wave quantitative study of an organisational merger (Kaltaiinen et al., 2017) showed the reciprocal influence between cognitive trust in the top management team and justice perceptions of the merger process. In

a related merger study, Lipponen et al. (2019) found that while development of post-merger trust in a new supervisor was negatively influenced when the new supervisor originated from the other pre-merger organisation, it was nevertheless positively influenced by favourable attitudes towards the pre-merger organisation and perceptions of top management reliability.

Field studies can also examine changes in trust over short time frames. For example, a 12-day experience sampling study of coworker trust (Baer et al., 2022) found that employees daily motives (daily strivings for achievement, affiliation, stimulation, and security) influence their willingness to take risks and their subsequent reliance and disclosure behaviour towards their coworker. A 4-wave weekly study of the impact of psychological breach on trust and integrity perceptions (Vogelgesang et al., 2020) showed that the magnitude of the change in trust influenced perceptions of behavioural integrity.

A number of other quantitative field studies have shown that it is important to understand not only the absolute level of trust at a given timepoint, but also the amount of change in trust over time. Newcomer studies have been used to illustrate this point, as most change is thought to occur early in relationships. For example, in a study on coworker trust among organisational newcomers, van der Werff and Buckley (2017) showed that trust increased over time. As the coworkers got to know each other during the socialisation period, the influence of the general context and social environment declined, and the influence of more personal trustworthiness assessments increased. Another study with newcomer army cadets (Dirks et al., 2021) showed that increases in trust were associated with higher ratings of leader effectiveness and unit performance compared to stable levels of trust. In this study, higher initial expectations of a leader were associated with a decline in trust over time, whereas lower initial expectations were associated with an increase in trust over time. However, the study showed that displays of transformational leadership can help both maintain high initial trust and can also overcome low initial trust, but lows levels of transformational leadership behaviours lead to both a decline in high initial levels of trust

and inability to grow trust form low initial levels. Interestingly, while both initial levels of trust and growth in trust over time were associated with leadership effectiveness, this study suggests that starting at moderate levels of trust and growing over time may be more effective than starting at a high level of trust, which can tend to drop as expectations are not met. These studies (Dirks et al., 2021; van der Werff & Buckley, 2017) highlight the need to consider both the level of trust at a given point in time and also the trajectory of trust over time.

Finally, it is interesting to note that a small number of studies examine trust both dyadically and longitudinally. Five studies examine reciprocal trust over time (Alarcon et al., 2018; Ferrin et al., 2008; Halbesleben & Wheeler, 2015; Jones & Shah, 2016; Wilson et al., 2022). One study examines mutual trust over time (Stevens et al., 2015). Two studies examine trust asymmetry over time (Brattstrom et al., 2019; Methot & Cole, 2021). Unlike the current study which adopts a quantitative within-subjects design to examine trust change over time in established workplace relationships, these previous studies employ experimental designs (Alarcon et al., 2018; Ferrin et al., 2008), examine new student relationships (Jones & Shah, 2016; Methot & Cole, 2021), adopt between-subjects time-lagged models (Alarcon et al., 2018; Ferrin et al., 2008; Halbesleben & Wheeler, 2015), or carry out qualitative investigations (Brattstrom et al., 2019; Stevens et al., 2015; Wilson et al., 2022).

4.5.5   Trust Change Hypotheses

Trust theory advocates that trust is a dynamic construct that can grow, stabilise, and decline over time (e.g., Lewicki et al., 2006; Mayer et al., 1995). Although trust can grow quickly in new relationships (McKnight et al., 1998; Meyerson et al., 1996), most trust theorists suggest that trust grows gradually based on repeated exchanges (Blau, 1964;

Lewicki et al., 2006). In addition, interdependence theory (Kelley et al., 2003) suggests that interdependent relationships such as those based on trust change over time as a relationship develops following reciprocal interactions and influences. Theorist have suggested that interdependence is a necessary condition for trust (Rousseau et al., 1998), and that trust is a necessary condition for interdependence (Balliet & Van Lange, 2013). Consequently, the current study expects that changes in trust levels will be related to three key factors that represent levels of interdependence and capture the concept of repeated interactions between two parties: initial starting levels of trust, the length of time the relationship has existed (relationship duration), and how frequently the parties interact with each other (communication frequency). The hypothesis reflects the two-factor concept of trust intentions (Behavioural Trust Inventory; BTI; Gillespie, 2003) which has been described in detail in Chapter 3.

Hypothesis 3. Changes in trust (reliance and disclosure) are influenced by initial starting levels of trust, length of relationship, and communication frequency.

Three sub-hypotheses are proposed for each of the three influencing factors. Firstly, it is anticipated that changes in both trust reliance and trust disclosure will be greater for those individuals and dyads who start at lower levels of trust. Trust theory (Lewicki et al., 2006) suggests that trust grows over time as a relationship develops, reaching a stable level in mature relationships. Interdependence theory (Kelley et al., 2003) also suggests dynamic interaction patterns within relationships which result in stable psychological states in the longer-term following adaptation processes by both parties. Thus, it is expected that those relationships at lower initial levels of trust have more scope to grow their trust, whereas those relationships at higher levels of trust are closer to or at stable levels.

Hypothesis 3a. Changes in trust (reliance and disclosure) are influenced by initial starting levels such that trust at lower initial levels increases more over time.

Secondly, it is hypothesised that changes in both trust reliance and trust disclosure will be greater for dyadic partners in newer relationships. Since trust theory suggests that trust grows over time as a relationship develops (Lewicki & Bunker, 1996; Shapiro et al., 1992), trust growth should be positively related to the duration of a relationship. The length of a relationship can be considered as a proxy for relationship maturity and familiarity between the parties (Dirks & Ferrin, 2002). Trust can, of course, decline if the norm of reciprocity (Gouldner, 1960) is not upheld, or if there are breaches of trust in a relationship (Lewicki & Brinsfield, 2017). Furthermore, trust can start at high levels and reduce over time when optimistic expectations are not met (McKnight et al., 1998; Meyerson et al., 1996). In general, however, individuals are disposed to develop trust-based relationships over time and to exit relationships where trust is low (Korsgaard, 2018). In addition, in the workplace context, people are usually inclined to maintain good relations with their colleagues (Colbert et al., 2016; Heaphy et al., 2018; Ragins & Dutton, 2007).

However, empirical evidence on the link between relationship duration and trust is mixed. An earlier meta-analysis on trust in leadership identified no link between relationship duration and trust, although the number of studies available for analysis at the time was limited to five (Dirks & Ferrin, 2002). A more recent meta-analysis of 39 studies covering both interpersonal and interorganisational trust (Vanneste et al., 2014) found a small positive correlation between relationship duration and trust but noted significant variance depending on the context. A recent meta-analysis on interorganisational trust (Zhong et al., 2017) found an inverted U-shaped relationship between relationship duration and trust, possibly

reflecting the risk of complacency and opportunism in prolonged relationships leading to a decrease in trust.

Rather than a direct effect, some studies examine the indirect effects of relationship duration and trust. For example, a study of knowledge-based workers (Levin et al., 2006) found that gender similarity is important in newer relationships, whereas shared perspectives become more important in longer relationships. Similarly, a dyadic study of trust between research collaborating firms (Bstieler et al., 2017) found that communication quality was the most influential factor on trust in the early to intermediate stages of a relationship, whereas decision process similarity was most influential in the later stages. Expectations of relationship continuity have also been found to have a stronger influence on trust in more established interorganisational relationships (Poppo et al., 2008). In contrast, other studies have found no indirect effect of relationship duration on trust. For example, Baer et al. (2018a) found the influence of coworker citizenship behaviours on coworker trust was not influenced by coworker relationship duration. Campagna et al. (2020) found the accuracy of a leader's felt trust was not influenced by leader-employee relationship tenure. Nienaber et al. (2022) found the trickle-down effect of organisational trust to coworker trust was not influenced by employee tenure. However, a study on knowledge sharing among coworkers which distinguished between the reliance and disclosure elements of trust (Alexopoulos & Buckley, 2013) found that trust reliance was more influential in relationships of shorter duration, whereas trust disclosure was more influential in relationships of longer duration.

In the context of the current study, coworkers get a chance to know one another better over the course of the development programme, which should have greater trust growth potential for less developed relationships than mature relationships. Based on trust development theory and empirical research, it is expected that newer relationships should start at lower levels of trust and increase to a greater extent.

Hypothesis 3b. Changes in trust (reliance and disclosure) are influenced by length of relationship such that trust within newer relationships starts at lower levels and increases more over time.

Third, it is hypothesised that changes in both trust reliance and trust disclosure will be greater for dyadic partners who communicate more frequently with each other. Trust theory suggests that regular communication allows the exchange of information about individual preferences and shared values, leading to deeper levels of knowledge-based trust (Lewicki & Bunker, 1996). Interdependence theory (Kelley et al., 2003) also suggests that information availability is a key element of trust-based interdependent relationships. However, a more detailed examination of the association between communication frequency and trust change over time has not received much theoretical attention. Empirical research with senior manager coworkers has shown that the frequency of communication has a positive influence on levels of trust (Becerra & Gupta, 2003). Similarly, a study of multinational company coworkers (Nienaber et al., 2022) found that frequency of communication positively influenced coworker trust. A study of supervisor-subordinate dyads (Miller et al., 2019) found that more frequent communication is associated with less relationship conflict and higher trust. McAllister (1995) found that interaction frequency had a significant link with affect-based trust, although subsequent research did not support this finding (Webber, 2008). However, these empirical studies are cross-sectional snapshots which measure trust at a single point in time, therefore while they do confirm that communication frequency is associated with higher levels of trust, they do not provide evidence of communication frequency being associated with changes in trust levels over time.

Most influential trust theorists agree that regular communication facilitates individuals getting to know each the other and making more informed trustworthiness

assessments (Lewicki et al., 2006). The deepest forms of trust (identification-based trust) are thought to exist in only a small number of close relationships between people (Lewicki & Bunker, 1996). Perhaps more importantly, as individuals can all start and stabilise at different levels of trust, changes in trust rather than solely the level of trust can be a more powerful explanatory construct (e.g., Dirks et al., 2021; Drescher et al., 2014; Lipponen et al., 2019; Vogelgesang et al., 2020). Thus, the idea that communication frequency may be associated with a change in trust levels in addition to higher absolute levels of trust could be a valuable extension of trust theory. Therefore, it is hypothesised that individuals who communicate more frequently with each other will have higher levels of trust in each other and higher levels of positive change in trust.

Hypothesis 3c. Changes in trust (reliance and disclosure) are influenced by communication frequency such that more frequent communication is associated with higher levels of trust and higher levels of positive change.

4.6   Trust Congruence

Trust congruence has been defined as 'a bilateral indicator of the extent to which two individuals trust each other' (Tomlinson et al., 2009, p.174). Thus, trust congruence reflects the degree of symmetry between the trust levels that two individuals have for each other. Trust congruence is analysed on an objective dyadic level by collecting the trust levels of each party and calculating the actual difference between trust given and trust received. Trust congruence can also be analysed subjectively by collecting trust felt and trust given from one party in a relationship, but this individual-level construct is not the focus of the current study. Trust congruence can range from highly congruent (or symmetric) to highly incongruent (or asymmetric).

Trust congruence has been shown to significantly influence dyadic outcomes above and beyond absolute levels of trust. This section reviews the theory and empirical research related to trust congruence. Following the categorisation introduced by Korsgaard et al. (2015), in this study highly congruent trust is labelled mutual trust, and incongruent trust is labelled asymmetric trust. Mutual trust and asymmetric trust are examined in turn, and the section concludes with a set of hypotheses regarding trust congruence which will be examined in the current study.

4.6.1   Mutual Trust

Mutual trust is an emergent property of the dyad where both parties are presumed to have a shared perception of the trust each has in the other (Korsgaard et al., 2015). Mutual trust implies that both parties trust each other to the same extent, more or less, and that each party is aware of the level of trust they give and receive (Deutsch, 1958). This concept of evenly balanced trust based on shared understanding is implicit in much of the early trust literature. For example, the dynamic spiral model of trust reinforcement from Zand (1972) proposed that trust reaches an equilibrium level in a dyad after a series of exchanges.

Until recently, mutual trust has been the dominant assumption in trust research (Dirks & de Jong, 2022). Single-sided trust research at an individual-level is often presented as representative of trust at a relationship level. In addition, single-sided trust research sometimes uses a shared referent to capture mutual trust. Dyadic trust studies taking a mutual perspective measure trust on both sides of the relationship but presume a shared level of trust. In quantitative studies this is usually justified by using statistical indices such as the intraclass correlation coefficient to demonstrate the levels of similarity within the dyad before proceeding to use an aggregated measure of trust in the research analysis. The focus

of mutual trust studies is generally not the level of agreement within the dyad but rather the antecedents and consequences of shared levels of trust.

Nearly all of the mutual trust studies identified in the last decade (Table 4.2) are studies of interorganisational trust. For example, in study of dyadic relationships between small businesses, Gupta et al. (2016) found that mutual trust influenced the referral income received by the individual firms from their partners. A study of university-industry research collaborations (Bstieler et al., 2017) found that antecedents of mutual trust included reciprocal communication and decision process similarity, which varied depending on relationship maturity, with reciprocal communication more effective in early stages of a relationship and decision process similarity more effective in later stages. A qualitative case study of two car manufacturers and their suppliers (Stevens et al., 2015) charts the progression of mutual trust over time through relationship reorientation and recalibration behaviours by both parties. Empirical research generally supports the idea that shared context and exchanges promote mutual trust, which in turn leads to high quality cooperative relationships.

What is less clear, however, is how different levels of mutual trust emerge and the consequences of different levels of mutual trust (Korsgaard et al., 2015). One experimental study of negotiation (Yao et al., 2021) addressed this issue. The study showed that both high-trust negotiating dyads and low-trust negotiating dyads can generate joint gains. Consistent with previous meta-analysis on trust negotiation (Kong et al. 2014), this study found that high-trust negotiating dyads generate joint gains directly through information sharing and insight into each other's interests and needs. However, it also showed that low-trust negotiating dyads have the potential to generate joint gains indirectly, by greater use of multi-issue offers, by processing information holistically rather than analytically, and by generating more accurate insight into mutually beneficial tradeoffs and the relative priorities of each party.

In contrast to a mutual trust perspective, there is a growing view in the trust literature that trust is not necessarily shared at equal levels between partners or within groups. This is especially evident in the team trust literature where there is an emerging trend to examine team trust as a dispersion-based construct rather than a shared group construct (e.g., de Jong & Dirks 2012). This form of incongruent or asymmetric trust within interpersonal relationships is discussed in the following section.

4.6.2 Asymmetric Trust

Theorists have highlighted that trust is not necessarily mutual between parties (Brower et al., 2000; Korsgaard & Bliese, 2021; Schoorman at al., 2007; Tomlinson et al., 2009). Individual differences in trust propensity, trustworthiness perceptions, attitudes to risk, and interpretations of situational and relational factors (Mayer et al., 1995) imply that trust is unique to an individual, even in the context of a relationship. Taking an asymmetric or incongruence perspective, two parties in a relationship can have different levels of trust in each other (Tomlinson et al., 2009). The degree of dyadic trust differences can range from high incongruence (very different) through moderate incongruence (a little different) to congruence (quite similar). In addition, congruence/incongruence can occur at low, moderate, or high levels of trust. It has been proposed that trust incongruence negatively affects joint behavioural outcomes, and that trust congruence, even at low levels of trust, is preferable to trust incongruence at higher levels of trust (Tomlinson et al., 2009). This is explained by the idea that even at low trust levels, congruence promotes a degree of mutual understanding, whereas trust incongruence, even at higher levels of trust, runs the risk of misunderstanding and exploitation in the relationship. As high-quality relationships depend on shared understanding and mutual concern, a high degree of trust congruence at a high level of trust would appear to be the optimum trust profile.

Empirical research, although limited in this area, supports the view that trust incongruence is detrimental to dyadic relationships. For example, a study of managers and subordinates (Brower et al., 2009) demonstrated that helping behaviours were highest when both the manager and the subordinate had high levels of trust in one another. A study of cognitive and affective trust between supervisors and their work group (Carter & Mossholder, 2015) demonstrated the positive effects of trust congruence on performance and the positive effects of congruence occurring at higher rather than lower levels of trust. A longitudinal study of undergraduate students taking a leadership development class over 18 months (Methot & Cole, 2021) found that trust congruence at an early period positively influenced the development of supportive peer mentor relationships over time. A study of team trust using dyadic measurements (de Jong & Dirks, 2012) found that dyadic trust congruence within the team strengthened the positive relationship between intrateam trust and team performance.

Yet most interpersonal trust research assumes a level of mutuality and very little attention has been paid to alternative perspectives (Korsgaard et al., 2015). Likewise, a recent review of interorganisational trust research (Graebner et al., 2020) concluded that mutual trust may not be as prevalent as the mostly single-sided literature suggests and recommended more attention to the perspective of trust incongruence or asymmetry. The current study adopts the view that trust levels can be incongruent and develops a set of hypotheses regarding the negative impact of trust incongruence on dyadic collaboration and helping behaviours which are presented in the next section.

4.6.3   Trust Congruence Hypotheses

The current study explores the influence of trust incongruence within interpersonal dyadic work relationships. It draws on previous trust theory which suggests that trust is not

necessarily mutual between parties (Mayer et al., 1995; Schoorman et al., 2007) and can display levels of incongruence which are detrimental to joint outcomes (Tomlinson et al., 2009). It also draws on interdependence theory (Kelley & Thibaut, 1978) which suggests that nonmutual dependence can be detrimental to both parties in a relationship and proposes that trust can be considered a proxy for assessing subjective dependence perceptions. It tests a set of hypotheses in relation to the influence of trust incongruence within interpersonal dyadic work relationships, specifically on interpersonal citizenship behaviours (ICBs) performed by one member of an SME top management team towards another. Previous empirical research has demonstrated the detrimental effect of trust incongruence on ICB using one-factor measures for both trust and ICB (Brower et al., 2009). The hypotheses of the current study reflect the two-factor concept of trust intentions (Behavioural Trust Inventory; BTI; Gillespie, 2003) and the two-factor concept of ICB (Settoon & Mossholder, 2002) which have been described in detail in Chapter 3. Thus, a more fine-grained examination of the impact of dyadic trust incongruence is presented.

Hypothesis 4. The level and incongruence of dyadic trust intentions interact such that the positive relationship of trust (reliance and disclosure) with interpersonal citizenship behaviours (task-focused ICB and person-focused ICB) is stronger at lower levels of trust incongruence than at higher levels of trust incongruence.

Four sub-hypotheses are proposed to reflect the impact of each element of trust on each element of ICB. Similar to hypothesis 2, as task-focused ICB and person-focused ICB are considered complementary forms of ICB (Settoon & Mossholder, 2002), similar effects are proposed for each.

Hypothesis 4a. The positive influence of trust (reliance) on task-focused ICB is stronger at lower levels of trust (reliance) incongruence

Hypothesis 4b. The positive influence of trust (reliance) on person-focused ICB is stronger at lower levels of trust (reliance) incongruence

Hypothesis 4c. The positive influence of trust (disclosure) on task-focused ICB is stronger at lower levels of trust (disclosure) incongruence

Hypothesis 4d. The positive influence of trust (disclosure) on person-focused ICB is stronger at lower levels of trust (disclosure) incongruence

4.7   Chapter Summary

This chapter discussed the theoretical basis for this research and reviewed the recent empirical research relating to dyadic trust. It presented the case for several hypotheses concerning the patterns of dyadic trust within the context of reciprocal work relationships. The chapter began with a definition of dyadic trust and presented a review of empirical research in this area. Based on the literature a series of hypotheses were proposed regarding the reciprocal patterns of dyadic trust, the dyadic development of trust over time, and patterns of trust congruence within the dyad. In the following chapter the methodology employed to test these hypotheses will be presented.

5.   Research Methodology

5.1   Introduction

This chapter introduces the methodology employed to examine the hypotheses developed in the previous chapter. The chapter has nine main sections. First, it outlines and justifies the positivist philosophical perspective underpinning the research approach. Second, it discusses the key elements of the research design: a quantitative field study using self-reports; a dyadic level of analysis; and a repeated measures design facilitating longitudinal analysis of change over time. Third, it explains the appropriateness of the population chosen for the research and describes the key demographics of the final sample collected. Fourth, it outlines the design and pretesting of the survey questionnaire. Fifth, it specifies the detailed procedure for the administration of the surveys and data collection. Sixth, it provides a description of the efforts made to maximise the survey response rates and evaluates the impact of the actual response rates achieved. Seventh, it provides a detailed description of the measures used for each construct under examination. It then outlines the steps taken to prepare the data for analysis and concludes with an overview of the data analysis strategy.

5.2   Research Philosophy

All social science research, including organisational research, is conducted on the basis of specific beliefs and assumptions about the nature of reality (ontology), how knowledge can be obtained (epistemology), and the relationship between theory and practice (praxeology) (Burrell & Morgan, 1979; Tsoukas & Chia, 2011). These three dimensions of philosophical enquiry have a fundamental influence on theoretical approaches, research questions, and research methodology. There are many different schools of thought which

have been classified into four mutually exclusive frameworks or paradigms for organisational analysis: functionalism, interpretivism, radical structuralism and radical humanism (Burrell & Morgan 1979). Positivism, within the functionalist paradigm, is generally acknowledged as the current dominant philosophy in the social sciences and in organisational science.

Positivism (Auguste Comte, 1798-1857) is a realist ontology and objectivist epistemology which assumes there is an objective, generalisable, universal reality which can be examined through empirical research methods. These methods of scientific enquiry involve rigorous and controlled observation, experimentation, and replication. They are designed to ensure that the researcher's role in the research process (axiology) is minimised and seek to prevent the values of the researcher having an influence on the observations. While early positivism focussed mainly on observation and description, neo-positivism utilises the hypothetico-deductive model to explain and predict phenomena (Hempel, 1966; Popper, 1963). Positivists generate theoretical models of behaviour from which hypotheses of relationships between constructs are developed and empirically tested. The hypothetico-deductive model has become the dominant research model in the fields of management (Colquitt & Zapata-Phelan, 2007) and organisational psychology (Cortina et al., 2017).

Empirical methods include quantitative analysis, qualitative analysis, laboratory experimentation, meta-analysis, and mixed methods. However, most empirical research in management and organisational behaviour adopts a quantitative approach. For example, 83% of articles published over the last twenty years in the journal "Organizational Research Methods" were quantitative (Aguinis et al., 2019). Quantitative research translates observations into numerical quantities which are then analysed using a variety of statistical methods, including factor analysis, multiple regression, multilevel modelling, and structural equation modelling. This enables correlational or causal inferences to be drawn about

relationships between theoretical constructs. Observations are drawn from samples which correspond to larger populations through probability-based inferences.

Although early positivist research was limited to observable behaviour, modern positivism examines unobservable mental processes, mainly through the employment of field-based self-report questionnaires or surveys. Multiple item scales are developed to capture a wide variety of variables including personality traits, values, beliefs, perceptions, attitudes, affect, and behaviours. These observed variables are analysed via statistical models in order to estimate latent variables, that is, abstract variables that are inferred rather than directly observed. Although self-report methods are not error free and have been criticised for their validity, they have been defended as the best available method of gathering information about inner psychological processes (Chan, 2009).

Positivism is also acknowledged as the most common research orientation in trust research. In a recent examination of the most cited journal articles on the topic of employee trust in their organisations, Siebert et al. (2016) illustrated that the majority were positioned in the functionalist paradigm, written from a psychological perspective, and characterised by positivistic methodologies and quantitative data collection methods. Similarly, Isaeva et al. (2015) found that the self-perceptions of leading trust researchers regarding their own epistemologies were predominantly positivist. The literature review in the previous chapter also illustrates the predominance of positivistic epistemology and quantitative research design in trust research. As trust is generally agreed to be a psychological state (Rousseau et al., 1998), it is not surprising that quantitative measurement via self-report questionnaires is the most common empirical approach. Trust within this study is also conceptualised as a psychological state within an individual and a positivist epistemological method of scientific enquiry is adopted which employs a quantitative research design approach.

Proponents of positivism have been criticised for a lack of self-reflection regarding their epistemological philosophy and assumptions (Tsoukas & Chia, 2011). Explicit

articulation of a positivist research philosophy is rare in academic journal articles. A significant proportion of leading trust researchers have been found to lack explicit awareness of their own research epistemology, which could be interpreted as a form of implicit positivism as a result of unquestioningly belonging to the dominant positivist mainstream (Isaeva et al., 2015). In addition, it has been suggested that many organisational trust studies which have adopted a positivist approach have a distinctly managerialist tone and are not truly objective or value free (Siebert at al., 2016). Calls have been made for a more pluralistic approach to include consideration of other philosophical perspectives (such as interpretivism or social constructionism) in order to reach a richer understanding of the ambiguous concept of trust from the viewpoints of all parties involved, and how it is influenced by time and context (Isaeva et al., 2015; Siebert et al., 2016). The trust research community has recognised the risk of the positivism dominance and is actively encouraging methodological openness to balance the "prevailing bias toward quantitative methods" (Li, 2011, p. 17). In addition, the contribution of different perspectives to providing deeper understanding of the multi-faceted nature of trust has been recognised (Lyon et al., 2015).

Nevertheless, positivist researchers and methodologists in the organisational and social sciences would contend that there is continuous self-scrutiny of methodological assumptions and established practices within the field. For example, two volumes have been published in recent years which challenge some common methodological and statistical practices for their lack of scientific rationale (Lance & Vandenberg, 2009, 2015). Best practice recommendations and directions for methodological improvements are a regular feature in top academic journals of organisational science (e.g., Aguinis & Edwards, 2014; Aguinis et al., 2018, 2021; Heggestad et al., 2019). Debates and challenges within the positivist research community regarding epistemological concerns are alive and well (e.g., Cortina, 2020; Edwards, 2020; Powell, 2020; Zyphur, 2017, 2020). Positivism in the

organisational sciences is a dynamic epistemology and its dominance shows no signs of declining in the near future.

Finally, the importance of methodological fit (internal consistency between the research question, prior work, research design, and theoretical contribution) in organisational research studies has been highlighted (Edmondson & McManus, 2007). This proposes that research in less mature fields with undefined constructs suits qualitative designs and exploratory analysis such as thematic content analysis. In contrast, mature theory characterised by well-developed constructs and more precise models are suited to quantitative designs and deductive analysis. In the last twenty years, trust research has moved from being heavily conceptual to being predominantly empirical (Mollering et al., 2004). A degree of agreement is emerging in theoretical conceptualisations of trust and several well-validated measures of trust have been developed (Dietz & Den Hartog, 2006; Gillespie, 2012, 2015; McEvily & Tortoriello, 2011). As a result, the field of trust research is very suited to quantitative research methods.

In conclusion, the current research design adopts the predominant paradigm in the study of psychological phenomena within organisations today and takes a positivist philosophical perspective. The methodological choice influenced by this epistemology comprises a quantitative research design which uses self-report questionnaires, predefined constructs, and hypothesised causal relationships. As the field of interpersonal trust is reasonably mature, the current research avails of established measures and advanced statistical analysis techniques. The next section explains in detail the research design characteristics (dyadic, longitudinal, repeated self-report measures), and is then followed by a description of the sample, measures, and the data analysis approach.

5.3   Research Design

This study can be characterised as a quantitative field study of self-reported measures. Two key features of the study provide a more robust design than the more commonly employed method of cross-sectional "one-shot" data from single participants. Firstly, the research design is dyadic, that is, it examines data from pairs of people interacting within a relationship. This provides a more complete picture of a trust relationship and reduces the risk of single source bias. Secondly, the research design is also longitudinal, that is, it observes repeated measures of the same variables over time. Five waves of data were collected over a 6-month period, for five cohorts spanning a total elapsed data collection period of 3 years. This allows the examination of stability and change in trust levels and provides a more complete understanding of the temporal nature of trust. This combination of dyadic and longitudinal design is reasonably rare in trust research and presents specific design considerations and methodological complexity. The following sub-sections describe the key design features and choices, including self-report methods, the issue of common method variance and how it is managed, dyadic design considerations, and longitudinal design considerations.

5.3.1   Quantitative Research via Self-Report

This study employed a quantitative approach with self-report questionnaires whereby participants were asked about their own individual characteristics and their perceptions of their relationship partner. Quantitative studies using self-report instruments are arguably the dominant method for assessing trust in the organisational sciences. A review of employee trust research by Siebert et al. (2016) found that most studies used quantitative survey data collection methods. Several meta-analytic studies have been carried out which indicate a strong body of quantitative trust research and illustrate the emerging maturity of

the field (Balliet & Van Lange, 2013; Breuer et al., 2016; Colquitt et al., 2007; de Jong et al., 2016; Dirks & Ferrin, 2002; Feitosa et al., 2020; Legood et al., 2020). Furthermore, quantitative research approaches used to test precise models and hypotheses such as those in the current study are characteristic of effective field research in areas of mature theory (Edmondson & McManus, 2007).

Self-report measures were considered appropriate for the perceptual and subjective nature of the constructs used within this research. As the current study adopts the definition of trust as a psychological state (Rousseau et al., 1998), self-reports are considered an appropriate method to capture individual trust perceptions and behavioural intentions. It has been argued that self-reports are the best and even the only method by which to capture psychological constructs and internal states (Chan, 2009). Self-reports were also well suited to the classroom research setting of the current study.

The most common criticism levelled against the self-report method is the fundamental question of construct validity, that is, the extent to which the operationalisation of a construct measures the concept it is attempting to measure (Bagozzi et al., 1991; Campbell & Fiske, 1959). In order to maximise construct validity, the current study utilised well-validated scales which were selected to be clearly aligned with the theoretical foundations and referents of trust. Another advantage of using well established scales is that they contain parsimonious, readily comprehensible questions that have been tested rigorously to avoid leading questions and value-laden terms, which should reduce response biases (Hinkin, 1995; 1998).

5.3.2 Common Method Variance

Common method variance is a frequently mentioned methodological concern raised by organisational psychologists and management researchers (e.g., Aguinis et al., 2018; Brannick et al., 2010; Conway & Lance, 2010; Fuller et al., 2016; Podsakoff et al., 2012; Spector & Brannick, 2010; Spector et al., 2019). Common method variance (also known as common method bias, mono-method bias, or just method variance) is the variance attributable to the measurement method rather than to the constructs themselves which are being measured (Campbell & Fiske, 1959). It is a form of bias or systematic measurement error which provides an alternative explanation for an observed relationship between measures of different constructs that is independent of the one hypothesised (Podsakoff et al., 2003). In other words, the shared variance between constructs may be attributable to using the same data collection method rather than to a true relationship between the constructs of interest. Common method variance has the potential to generate both Type I errors (false positives where a significant relationship detected when there is not one) and Type II errors (false negatives where a a non-significant relationship detected when there is one). Studies have indicated that 18% to 32% of the total variance of items used was due to common method variance (Podsakoff et al., 2012). However, some scholars have suggested that the problem is exaggerated or oversimplified (Brannick et al., 2010; Chan, 2009; Spector, 1994; 2006).

Several procedural remedies been suggested to control the occurrence of common method variance (Brannick et al., 2010; Podsakoff et al., 2003; Podsakoff et al., 2012). Many of these techniques were incorporated into the design of the current study. When the survey was first introduced to participants, an oral briefing outlined the research programme objectives and the value of their input. This aimed to motivate participants to expend the required amount of cognitive effort to generate accurate answers and to discourage acquiescent response tendencies. Assurances of anonymity and confidentiality were also

given in order to reduce social desirability response tendencies and to encourage honest answers. In addition, it was emphasised that there was no right or wrong answer, reducing evaluation apprehension. Procedural remedies were also taken into consideration in the design of the surveys. Validated scales and measures were chosen for their clear and concise language. The survey was separated into sections with clear instructions to encourage an optimum level of cognitive processing and to maximise the salience of the survey content. All scale points (rather than just the end points) were clearly labelled to encourage the full range of responses. Varied scale anchors appropriate to the specific measure reduced the possibility that some of the covariation observed among the constructs was as a result of the consistency in the scale properties rather than true relationships between the constructs. In addition, the order of variables was changed between time points, limiting question order effects. The longitudinal nature of the research also reduced the potential for common method bias by controlling for temporal influences and participant temporary states.

Common method variance is inherently unobservable and its occurrence can only be inferred methodologically. The data collected in the current study show non-significant correlations both within and between time points which can be interpreted as an indication that a baseline level of measurement error does not occur between all constructs (Spector, 2006). The widely used Harman's single-factor test involving a principal components factor analysis extracted 18 factors which accounted for 81.0% of the total variance. The first factor explained only 34.6.% of the variance, indicating that no one general factor in the unrotated factor structure emerged to account for the majority of the variance. This provides evidence that common method variance is not a concern in the present study, although the limitations of Harman's single-factor test have been highlighted (Fuller et al., 2016; Podsakoff et al., 2003). Further support from confirmatory factor analysis is provided in the results chapter.

In conclusion, the risk of common method variance was considered in the research design of the current study. The constructs under study are psychological states which

provide limited options for capture other than the single method of self-report. Procedural remedies covering survey administration and survey design were added to reduce the occurrence and impact of common method bias. The dyadic and longitudinal nature of the study also reduced the potential for common method bias. As a result, common method variance is not a concern in the present study.

5.3.3   Dyadic Level of Analysis

Dyadic research examines "relationships, interactions, and exchanges that occur between two entities" (Krasikova & LeBreton, 2012, p. 739) and how two partners in a dyad each contribute to the relationship (Gooty & Yammarino, 2011; Kenny et al., 2006). Although many social and organisational interactions involve groups, relationship theory suggests that all human interactions can be broken down into exchanges between two people (Berscheid, 1999). Indeed, it has been proposed that "the dyad is arguably the fundamental unit of interpersonal interaction" (Kenny et al., 2006, p.1). The present study conceptualises trust as inherently reciprocal whereby two parties engage in an ongoing interactive process of trusting and being trusted, and thus adopts a dyadic level of analysis.

A core feature of dyadic research is that both parties in a dyad are observed and the same variables are examined from each party (Kenny et al., 2006). The current study meets this definition of dyadic research in that the key variables were gathered from each of the two parties in a dyadic work relationship, and the hypotheses are focused on the two-sided relationship. The variables gathered from each party are outlined in section 5.8 of this chapter.

An important consideration in the design of dyadic data research is whether the dyad members are distinguishable or indistinguishable (Kenny et al., 2006) as this has implications for hypotheses development and statistical analysis choices. Dyads are categorised as distinguishable when there is something common to all dyads that

differentiates the two members (e.g., gender in heterosexual couples or leader-follower roles in organisations), and when this distinguishing feature is hypothesised to make some sort of empirical difference. The current study is examining coworker relationships and does not hypothesise in relation to any distinguishing features to categorise coworkers, therefore the research design is categorised as indistinguishable. The statistical methods chosen to analyse indistinguishable dyads are covered in the final section of this chapter.

5.3.4   Longitudinal Study with Repeated Observations

Organisational research is very much concerned with the temporal sequence by which phenomena under examination evolve and develop (George & Jones, 2000; Mitchell & James, 2001). However, until recently, change over time has received little research attention. Calls for more frequent use of longitudinal research designs to examine the temporal aspect of behaviour are now common (e.g., Ancona et al., 2001; Shipp & Cole, 2015; Sonnentag, 2012). This is particularly relevant to the study of trust, which has long been conceptualised as a dynamic construct that changes over time (Kramer & Lewicki, 2010; Lewicki & Bunker, 1996; Lewicki et al., 2006; Rousseau et al., 1998). Trust can develop, stabilise, and decline over the course of a relationship, at varying speed depending on individual differences, relationship events and contextual factors (Korsgaard et al., 2018).

Longitudinal research is defined as that using at least three waves of data for the same construct, although more than three waves is preferable as this can reveal non-linear patterns including change plateaus and speed of change (Ployhart & Vandenberg, 2010). Longitudinal research also requires a sensible metric for tracking time suited to the constructs being studied and the research question (Singer & Willett, 2003). The number of time points and the length of the interval between time points depends on the specific phenomenon under examination and should be guided by theory. When data collection time

point intervals are sub-optimal (too frequent or too infrequent), the true pattern of change will not be observed.

The metric for time used in the current research study was constrained by the field setting in that it was shaped by the schedule of the executive development programme where the data collection took place. Participants attended classroom events at five time points, at intervals of approximately 6 weeks over the course of 6 months. Most participants in the current sample were in established work relationships. A consideration of relationship length is relevant when examining trust dynamics and selecting the appropriate time intervals to study trust change. Trust theory suggests that trust develops rapidly at the start of relationships, then stabilises, punctuated by specific events (Korsgaard et al., 2018). Existing relationships have been found to show changes in trust levels, ranging from daily fluctuations based on daily reciprocity (Halbesleben & Wheeler, 2015), monthly changes in organisational returnees (van der Werff et al., 2019a), to yearly changes influenced by organisational change events (Lipponen et al., 2019). Two-wave studies of established relationships have also shown changes in trust levels over several months (Colquitt & Rodell, 2011; Naber et al., 2018). Based on trust theory and empirical evidence from trust studies, time intervals of approximately 6 weeks were considered adequate to capture trust trajectories in the current sample.

5.4   Research Sample

Participants in this study were members of the top management team of Irish small and medium-sized enterprises (SMEs) who attended a government development programme run by Enterprise Ireland which is the government organisation responsible for the development and growth of Irish enterprises in world markets. The programme was delivered by the Centre for Executive and International Education of Dublin City University

Business School. Top management teams offer an ideal context for the examination of dyadic relationships as team members are usually highly interdependent and need high levels of cooperation and trust (Barrick et al., 2007; Hambrick et al., 2015). Furthermore, SMEs can provide a promising setting for the examination of interpersonal dynamics as they can be less constrained by complex organisational systems and governance mechanisms (Simsek et al., 2005). Difficulties with access to TMTs in general, and to SMEs in particular, have resulted in this being an understudied research setting (Priem et al., 1999).

Five programmes were run over a 3-year period, starting in May 2017 and completing in September 2020. The number of attendees at each programme can be seen in Table 5.1. Three individuals attended from each firm, and in a small number of cases, more than three attended. Each individual was asked to rate two colleagues. An initial response rate of almost 100% of programme attendees at Time 1 chose to participate. This high response rate can be attributed to the classroom data collection setting. Responses that were unusable (due to significant missing data or inability to match to a dyad partner) were eliminated. The final sample for Time 1 consisted of 90 firms and N=266 individuals, giving an overall participant response rate of 91.4%. The 266 responses were matched into 230 dyads.

The average age of the final sample was 43.83 years (SD 8.99), with ages ranging from 24 to 70 years. 78.2% of participants were male (N=208). Nearly all (95%) of the participants reported as having attended third level education, with 21.7% completing at certificate/diploma level, 35.8% at bachelor's degree level, and 38.2% completing masters level courses or higher. Length of working relationships ranged from brand new to established of up to 30 years (mean = 6.1 years, SD = 6.1). The sample contained leader-follower relationships (Dyad N=72, 31.3%), peer relationships (Dyad N=63, 27.4%), and unclassified relationships (Dyad N= 95, 41.3%).

Table 5.1

Sample Size Time 1

Cohort	Start date	Finish date	# Firms	# Participants	Usable data # firms	Usable data # participants	# Dyads
1	May-17	Dec-17	19	53	15	45	42
2	Oct-17	Apr-18	19	64	19	56	48
3	May-18	Dec-18	23	77	23	74	63
4	May-19	Dec-19	16	47	16	45	40
5	Oct-19	Sep-20	17	50	17	46	37
Total			94	291	90	266	230
				100%		91.41%	

5.5   Survey Design and Testing

The validity of the survey questionnaire and its suitability for the research setting was considered in advance of data collection. Firstly, all the measures chosen were pre-existing scales which were well-established in the research literature. They were reviewed by the Head of Programme Development of the Centre for Executive and International Education and another experienced researcher in Dublin City University Business School. This ensured that the scales and items were theoretically relevant and would have an acceptable level of face validity for the participants. This also ensured that the structure and lay-out of the questionnaire adhered to good methodological practice. Next, the questionnaire was administered to two graduate students to test both the clarity of the instructions and the timing estimates for completion. These reviews resulted in some minor adjustments to the survey titles and instructions for completion. The wording of all items remained unchanged from the original scales, other than the referent which was changed to "colleague".

The surveys gathered both individual data (demographical information plus individual difference self-assessments) and dyadic data (assessments of coworkers). At time point 1, these were separated for clarity and timing considerations into two survey

instruments and administered at two separate occasions during the day. Surveys at subsequent time points involved a much shorter amount of individual data, thus it was integrated with the dyadic data and collected at the same time in one instrument. This decision was influenced by the design of the programme, the time available for data collection, the length of each survey, and the increasing familiarity of the participants with the process as time progressed.

Significant consideration was given to the method by which each response could be matched to form a complete view for each participant of their total responses across data collection time points, and also to the matching of each response with its dyadic partner. Participant names and company names were not used in this study for data privacy reasons. In addition to legal risks, the use of names can give rise to social desirability bias and the misreporting of information by participants (e.g., Richmann et al., 1999; Tourangeau & Yan, 2007). Pre-coded forms were not considered because of logistical difficulties with administration in the classroom, as well as the lack of anonymity they would convey to participants. Instead, following the advice of Kulik (2011), each questionnaire asked for a respondent-generated code, whereby a unique but easily recalled code could be created by each participant at each time point. Code design must be simple enough to facilitate easy replication by the participant in the context, but complex enough to ensure uniqueness and to meet ethical standards of confidentiality. The code designed for this programme consisted of the initials of the participant, along with the initials of each of their two colleagues attending the programme, resulting in a unique code for every individual, and allowing the subsequent matching of both dyadic and longitudinal responses. Once the data were matched, all identifiers were removed as they were no longer required, and the data became fully anonymous.

The research design was submitted for approval to the Dublin City University Research Ethics Committee in advance of data collection. The letter of approval can be seen

in Appendix A. Data collection procedures and data storage met the requirements of the European Union General Data Protection Regulation 2016/679/EU legislation (GDPR, 2016).

5.6   Procedure

The research was introduced to participants by the researcher during the programme workshop session at Time 1. This introduction covered an outline of the research objectives and rationale, and the self-report nature of the study. Attendees were advised that participation was voluntary and that withdrawal from the study was possible at any time. Elaboration of the longitudinal design was left to subsequent time points in order not to overburden the participant at Time 1 and to address respondent fatigue at the time point it was most likely to arise. A research outline written in plain language was also made available to participants. This plain language statement can be seen in Appendix B.

Participants were advised of the confidentiality of individual responses. A key part of this included an explanation of the need for a personal identifier and reassurances on the confidentiality of this process. It was acknowledged that true anonymity could not be guaranteed, but by explaining the purpose of the identification procedures and the steps taken to protect the confidentiality of the information, the concerns of the participants were alleviated.

All surveys were administered in the classroom via paper-and-pencil questionnaires. The use of personal electronic devices for online collection within the classroom was not considered for practical connectively reasons and also to encourage responses. COVID-19 occurred in the middle of the programme for Cohort 5. As a result, the classes at time point 4 and 5 for this cohort were delivered online. Data collection at these two time points for this cohort was also transferred online, using the Qualtrics online survey platform.

Questionnaires were administered immediately before a planned break, usually the lunch break. This meant that participants could complete the questionnaire at their own speed, and on completion, could leave the room for their break. In this way the pressure on slower participants to complete the questionnaire was lessened, and potential frustration for faster participants as result of making them wait for others to finish was avoided. Questionnaires were administered in the classroom using coloured paper as this enabled the researcher to see very clearly if they had all been completed and collected. This also reduced the risk of a participant inadvertently leaving with their questionnaire along with their other take-away course material. This practice contributed to good response rates in the study. Questionnaires were collected promptly by the researcher in order to emphasise the confidentiality of the survey and the care taken with the information.

Dyadic and longitudinal matching and data entry were completed as quickly as possible thereafter in order to address any issues as they arose. The data used in this study were collected in conjunction with another research programme with the same sample. All data included in the current study were collected solely for the purposes of this research and were held separately to the data of the second research programme.

5.7   Responses

It is important to encourage high response rates in quantitative field studies because non-response bias can undermine the generalisability of the findings (Rogelberg & Stanton, 2007) and also because larger samples increase statistical power (Baruch & Holtom, 2008). Efforts to maximise survey response rates were considered in the research design of the current study and fall into four categories.

Firstly, the classroom scenario offered a very promising way to mitigate the risk of non-response as attendees were committed for the duration of the programme. Secondly, the

salience of the research and the sponsorship by both Dublin City University and Enterprise Ireland were emphasised in the introduction of the research to the participants. Topic salience has consistently been found to relate positively to survey response rates in general and is especially important to research involving top management teams (Anseel et al., 2010; Cycyota & Harrison, 2006). Participants were reminded at subsequent time points of the overall importance of the research to the sponsoring organisations and to the SME industry sector in order to encourage response motivation over time.

Thirdly, the research was introduced by the Head of Programme Development of the Centre for Executive and International Education at every occasion, adding to the authority of the study. The questionnaires were distributed by the researcher in person at every time point. The interaction between the survey researcher and the participant has long been proposed as a factor influencing survey participation rates (Groves et al., 1992, 2000). This becomes even more important in longitudinal research, where multiple data collection time points mean that researchers develop medium-term relationships with the respondents. Finally, much attention was given to the design of visually appealing surveys, a response facilitation technique recommended by many researchers (e.g., Rogelberg & Stanton, 2007). The provision of the plain language statement (Appendix B), and the emphasis placed on confidentiality also contributed to the credibility of the research programme. This confidentiality was reinforced by the use of a respondent generated code to link responses across time points and into dyads, rather than the provision of any identifying information, thus alleviating any concerns regarding individual or firm privacy.

Efforts to maximise survey responses in the current study resulted in participation rates at Time 1 of close to 100% (only 1 participant over the course of the five cohorts explicitly declined to take part in the research). Attrition of participants occurred in this study over subsequent time points for two main reasons. Firstly, some participants stepped out of the classroom for business purposes at the time of survey administration. Secondly, there

was some non-attendance by participants due to company exits, vacation time, and so forth, and two firms left the entire programme after Time 1. Following dyad matching, the response rates at each time point in the final sample can be seen in Table 5.2. Response rates dropped to approximately 60% by Time 3 and remained close to that level for T4 and T5. This is in line with attrition rates reported in previous longitudinal and dyadic research, which vary widely. For example, in a dyadic 5-day diary study of coworkers, Halbesleben et al. (2015) reported an initial response rate after matching of 78%, which dropped to 60% at the end of the study. Similarly, in a 10-week study of army cadets, Dirks et al. (2021) reported an initial response rate of 76%, which dropped to 47% at the end of the study. Ployhart and Vandenberg (2010) advised researchers to prepare for up to 50% drop between the first and last measurement occasion. The response rates of this study also compare very favourably with current response rates trends in social science research in general (Holtom et al., 2022).

Table 5.2

Sample Response Rates at each Time Point

Time	Survey Response (Individual) #	Survey Response Rate %	Dyads 2 members #	Dyads 1 member #	Dyads 0 Members #	Dyads Total
1	266	91.4	230	0	0	230
2	227	78.0	163	39	28	230
3	173	59.5	114	42	74	230
4	175	60.1	117	44	69	230
5	170	58.4	110	50	70	230

A wave level response rate analysis can be seen in Table 5.3. 82.7% of participants provided responses at three or more time points, and 35.3% of participants responded at all five time points. This is in line with previous longitudinal studies, for example, in a 3-wave study, Chen et al. (2011) reported response rates as low as 30% for all three waves.

Following the recommendations of several methodologists (e.g., Goodman & Blum, 1996; Ployhart & Vandenberg, 2010), demographics and mean trends at Time 1 were compared for those who responded at subsequent time points and those who did not, and no significant differences were found.

Table 5.3

Wave Level Response Rate

# of Waves Completed	Participants			Cohort				
	#	%	Cumulative %	1	2	3	4	5
5 time points	94	35.3	35.3	17	18	24	20	15
4 time points	85	32.0	67.3	10	16	28	16	15
3 time points	41	15.4	82.7	6	14	13	2	6
2 time points	37	13.9	96.6	9	7	9	3	9
1 time point (T1)	9	3.4	100.0	3	1	0	4	1
Total	266	100.0		45	56	74	45	46

5.8   Measures

All items employed in the current study were sourced from previously published and validated scales. Participants were requested to answer questions in relation to each top management team coworker who was attending the executive education programme with them. For most participants, this involved completing the survey twice, that is, once in relation to each of their two colleagues attending the programme. Item wording was adapted slightly to reflect coworker as the relevant referent. As the context was a top management team, the term "colleague" was chosen as the most appropriate coworker description.

Demographics and propensity to trust were measured at Time 1 and dyadic variables were measured at all five time points. A summary of the data collection time points is shown in Table 5.4. The order of scales within each survey was randomised at each time point to

help control for common method variance, including counterbalancing the order of the predictor and criterion variables (Podsakoff et al., 2003). All measures used a 5-point Likert scale which ranged from 1 (strongly disagree) to 5 (strongly agree), except for trust intentions which had a different anchor description (not at all willing, very willing). The full survey instrument for Time 1 can be found in Appendix C.

Table 5.4

Summary of Data Collection Time Points

Variable	T1	T2	T3	T4	T5
Trust Intentions	✓	✓	✓	✓	✓
Trustworthiness Perceptions	✓	✓	✓	✓	✓
Interpersonal Citizen Behaviours	✓	✓	✓	✓	✓
Relationship Length		✓			
Communication Frequency			✓		
Trust Propensity	✓				
Reporting Relationship			✓		
Demographics	✓				

The internal consistency of each of the study variables was assessed using Cronbach's alpha (Cronbach, 1951). All reliabilities exceeded the commonly accepted lower threshold of .70, and in most cases they were found to be greater than the recommended standard of .85 suggested by Nunnally (1978).

5.8.1 Trusting Intentions

Trusting intentions were measured using the 10-item Behavioural Trust Inventory (BTI; Gillespie, 2003). This measure of trust captures the willingness of the trustor to undertake trusting behaviours in relation to the trustee. While this scale is a behaviourally

orientated conceptualisation, it specifically captures trust as a psychological construct and a willingness to be vulnerable, in line with previous theoretical trust conceptualisations (Lewis & Weigert, 1985; Rousseau et al., 1998; Zand, 1972). The Behavioural Trust Inventory has shown strong measurement properties, is a highly proximal indicator of actual trust behaviour, and is generalisable to a wide variety of organisational settings (Dietz & Den Hartog, 2006; McEvily & Tortoriello, 2011). It was specifically developed to "measure trust sensitively in leader–member and peer relationships in a team setting" and "to capture the essential features of these typically complex and highly interdependent work relationships" (Gillespie, 2012, p. 183). In respect of peer relationships which are the focus of this study, the BTI has been used in previous empirical research to capture the vulnerability associated with trusting behaviours both at a group referent level (e.g., de Jong et al., 2021; Lee et al., 2010; van der Werff & Buckley, 2017), and at an individual coworker referent level (e.g., Alexopoulos & Buckley, 2013; Tomlinson et al., 2020). For these reasons, it was considered a robust and appropriate measure for this study of trust within top management team peer relationships.

The BTI measures two dimensions of trust intentions: the willingness to rely on the work-related skills, abilities, and knowledge of another (reliance); and the willingness to disclose sensitive work or personal information to another (disclosure). The full scale is available in Dietz and Den Hartog (2006), and in McEvily and Tortoriello (2011). The item response scale was changed from 1 to 7 to 1 to 5 to be consistent with how other survey items were measured. The 5-point rating scale ranged from 1 (not at all willing) to 5 (completely willing). The wording was adapted slightly to reflect TMT colleague as the relevant referent. Each sub-scale (reliance and disclosure) consists of five items. A sample item for reliance is: "How willing are you to rely on your colleague's task-related skills and abilities?". A sample item for disclosure item is: "How willing are you to confide in your colleague about personal issues that are affecting your work?". Both scales demonstrated

good internal consistency across all five time points in the current study showing alpha ranges for reliance (α = .85 to .91) and disclosure (α = .88 to .92).

5.8.2 Trustworthiness Perceptions

Trustworthiness was measured using the well-established scale from Mayer and Davis (1999) which assesses the trustworthiness perceptions of a trusting party for a specific referent. This trustworthiness scale was designed to be relevant to a variety of organisational relationships. Mayer and Davis (1999) utilised it in the context of employee trust in top management. It has since been used in many other settings with several diverse trust referents, including perceptions of leader trustworthiness (e.g., Chiaburu & Lim, 2008; Colquitt & Rodell, 2011; Lau & Liden, 2008), employee trustworthiness (e.g., Zapata et al., 2013), team trustworthiness (e.g., Serva et al., 2005), organisation trustworthiness (e.g., Baer et al., 2018), and interorganisational trustworthiness (e.g., Becerra et al., 2008). With specific relevance for the current study, it has also been previously used to examine assessments of coworker trustworthiness (e.g., Dirks & Skarlicki, 2009; Tomlinson et al., 2020).

This scale contains 17 items which capture three dimensions of trustworthiness: ability, benevolence, and integrity. Each item was rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Ability refers to "that group of skills, competencies, and characteristics that enable a party to have influence within some specific domain" (Mayer et al., 1995, p. 717). Perceived ability was measured by six items, including "My colleague is very capable of performing his/her job". This scale demonstrated a coefficient alpha in the range of .88 to .94 over the five time points. Benevolence refers to "the extent to which the trustee is believed to want to do good to the trustor, aside from an egocentric profit motive" (Mayer et al., 1995, p. 718). Perceived benevolence was measured by five items, including "My colleague would not knowingly do anything to hurt me". This scale demonstrated a coefficient alpha in the range of .87 to .92 over the five time points. Integrity refers to "the perception that the trustee adheres to a set of principles that the trustor finds

acceptable" (Mayer et al., 1995, p. 719). Perceived integrity was measured by six items, including "Sound principles seem to guide my colleague's behavior". This scale demonstrated a coefficient alpha in the range of .76 to .86 over the five time points. The reliability of the integrity subscale was lowered by the presence of one negatively worded item ("My colleague's actions and behaviors are not very consistent"). When this item was removed, the scale showed improved coefficient alphas ranging from .83 to .92 over the five time points. Previous research has demonstrated that reverse scored items can negatively influence scale reliability and are often not necessary (Dalal & Carter, 2015). There is precedence for dropping this specific item in previous research due to its negative impact on scale internal consistency (e.g., Frazier et al., 2010). In practice, many studies using this scale report the use of a sub-set of items without inclusion of this negative item (e.g., Dirks & Skarlicki, 2009; Serva et al., 2005). Consequently, this reverse score item was dropped from the trustworthiness integrity sub-scale for all subsequent analyses in the present study.

5.8.3   Interpersonal Citizenship Behaviour

Interpersonal citizenship behaviour (ICB) was measured at all five time points using the scale developed by Settoon and Mossholder (2002). This scale measures two dimensions of ICB: task-focused ICB and person-focused ICB. Participants rated the support they received from their coworker on a 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). Each sub-scale consists of three items. A sample item for task-focused ICB is: "My colleague helps me with difficult assignments, even when assistance is not directly requested.". A sample item for person-focused ICB is: "My colleague takes time to listen to my problems and worries.". Both scales demonstrated good internal consistency in the current study with alphas across the five time points ranging from .87 to .92 (task-focused ICB) and from .83 to .88 (person-focused ICB).

5.8.4 Moderator Variables

Similar to previous trust studies, relationship length was operationalised as the number of years the parties had worked together, and collected by a single item measure (e.g., Levin et al., 2006; Nienaber et al., 2022). Relationship length was collected at Time 2 by the following question: 'How long have you worked with this person in the current firm (years)? The sample contained a range of relationship lengths from brand new to established of up to 30 years (mean = 6.1 years, SD = 6.1). Relationship length was found to correlate with trusting intentions at each of the five points.

Communication frequency was collected at Time 3 by the following question: 'How often do you interact with this colleague in relation to work (face-to-face, email, telephone)?'. This was similar to the single item measure used in previous trust studies (e.g., Chua et al., 2008; Miller et al., 2019). Four response choices were offered: less than once a month; monthly; weekly; and daily. Over 80% of participants reported daily interactions. Communication frequency was found to correlate with trusting intentions at each of the five points.

5.8.5 Control Variables

A control variable is an extraneous variable that is not linked to the hypotheses being tested but could influence the outcomes (Spector & Brannick, 2011). A control variable is not the focal point of the research but is included into order to statistically highlight or remove any impact it has on the relationship between the focal variables. A cautious approach is advised to the inclusion of control variables in empirical research studies (Becker et al., 2016; Spector & Brannick, 2011). When there is no theoretical or empirical basis for assuming potential control variables have a particular connection to other variables, methodologists advise against their inclusion in the analysis, as it can lead to a misinterpretation of the results. The use of control variables must be justified and appropriate

for the research subject topic and research context (e.g., Bernerth & Aguinis, 2016; Carlson & Wu, 2012).

In line with the integrative model of trust (Mayer et al., 1995), trust propensity was included as a control item to confirm that it did not have an influence on dyadic trust patterns. Early trust theory (Rotter, 1967, 1971) suggested that those high in trust propensity would also be viewed as trustworthy by others. However, the results of investigations into the reciprocal effects of trust propensity are mixed, with some studies finding reciprocal effects (e.g., Yakovleva et al., 2010), but other studies finding inconsistent reciprocal effects or none (e.g., Yao et al., 2017, 2021). Furthermore, one-sided empirical trust research has demonstrated that the influence of trust propensity reduces over time as the parties get to know each other and the situational context (Colquitt et al., 2007; van der Werff & Buckley, 2017). For these reasons, trust propensity was not included in any hypothesis. Trust propensity was measured using the 4-item scale from Frazier et al. (2013), which was developed based on the definition of trust propensity proposed by Mayer et al. (1995). Each item was rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is "I usually trust people until they give me a reason not to trust them". Empirical research has shown that this scale possesses good psychometric properties, with acceptable coefficient alphas ranging from .80 to .92 (Chughtai, 2020; Frazier et al., 2013; Frazier et al., 2016; Kong, 2018; Uziel et al., 2020). The Cronbach alpha of this scale in the current study was acceptable (.83). Trust propensity was not found to influence any results in this study.

Although the study was examining coworker relationships, the sample contained some leader-follower relationships (Dyad N=72, 31.3%), as well as peer relationships (Dyad N=63, 27.4%), and unclassified relationships (Dyad N= 95, 41.3%) (data collected at T3). Trust theory suggests that power and status differences can impact trust, although propositions vary as to whether they have positive or negative impact (Blau, 1964; Weber at

al., 2004). Reporting relationship was controlled for in the analysis to confirm that it did not have an influence on reciprocal trust patterns.

Demographic information (gender, age, education) was collected from participants at Time 1. There is no theoretical reason for these variables to impact levels of trust in this context. This was confirmed in the current study by the lack of correlation of these variables with trusting intentions at any of the five time points. Accordingly, demographic variables were used solely for the purpose of sample description and were excluded from all subsequent analyses in the present study.

5.9   Data Preparation

Following data collection, several steps were undertaken to prepare the data for statistical analysis and hypothesis testing. First, individual responses were matched into dyad pairs, and patterns of missingness were assessed and handled. Second, the raw data were screened for minor errors and descriptive statistics were analysed for potential issues with multicollinearity or outliers. Third, several data files with different structures were created to facilitate the variety of dyadic analytic methods required. Finally, data analysis strategy was developed, and specific analytic methods and techniques were chosen.

5.9.1   Missing Data Techniques

Missing data is a feature of most quantitative research (Graham, 2009). Missing data is especially prevalent in longitudinal research (Ployhart & Vandenberg, 2010) and in dyadic research (Kenny et al., 2006). It is recommended that researchers should carefully consider how to deal with missing data based on statistical best practice, with the goal of reducing missing data bias and error in the analysis (Graham, 2009; Newman, 2014).

Missing data can occur at three levels of analysis: item-level missingness, construct-level missingness, and person-level missingness (Newman, 2014). Person-level missingness occurs when a respondent fails to answer the entire survey. Missing data at the person level has already been described in section 5.7 and is in line with previous longitudinal studies. Missing data at the item level (for those who responded) ranged from 3.5% (Time 1) to 0.4% (Time 5). Missing data of less than 3.5% can be considered minimal and does not pose a problem for data analysis, regardless of the missing data technique chosen (Newman, 2014).

Based on the profile of data missingness in the sample and the current advice of methodologists, a full information maximum likelihood (FIML) approach is adopted to handle missing data in the current study. FIML is a direct estimation technique that preserves statistical power by using all available data and generally yields less biased results than other methods. This method is now recommended for both relatively small amounts of missing data (less than 10%) as well as larger levels of missingness (Newman, 2014). It is also recommended for longitudinal analysis (Ployhart &Vandenberg, 2010). This method also has advantages for dyadic analysis, in that it can include some cases where one member provides limited data and is particularly recommended for the analysis of indistinguishable dyads (Ledermann & Kenny, 2017).

5.9.2   Data Screening

The data were examined in advance of the main statistical analysis to understand the characteristics of the sample and to verify that the responses were reasonable. Descriptive statistics, including the mean, range, and standard deviation of each item were generated to ensure that all values were within expected ranges. Most items (other than demographic and control variables such as age) were measured using a 5-point Likert scale, thus the detection of errors was reasonably easy. A small number of minor data entry errors were found and

corrected, most commonly the entry of double-digit values (e.g., '55') rather than single-digit values (e.g., '5'). As a precaution, wherever an item error was found, the data for the entire time point was checked for that respondent. As the data was predominantly made up of Likert scales, the issue of outliers did not apply.

Next, the scores for negatively worded items were reversed, and composite mean scores for each of the constructs were calculated. The impact of negatively worded items was examined through tests of scale reliability. As outlined in section 5.8.2, one reverse score item (trustworthiness-integrity) reduced scale reliability and was omitted from subsequent analysis.

Finally, the potential presence of multicollinearity in the data set was considered. Multicollinearity refers to the nonindependence of predictor variables, that is, the extent to which two or more independent variables are correlated with each other (Cortina, 1993). Multicollinearity can cause problems for statistical analysis techniques making it difficult to determine the separate effects of individual variables. It is important to note that multicollinearity considerations do not include the expected nonindependence of the same variables between time points, and the nonindependence of the same variables with a dyad, both of which are handled specifically by longitudinal and dyadic analysis techniques. The key consideration in multicollinearity is the degree to which it exists in a data set. A common and simple approach to the quantification of multicollinearity is correlation analysis, where correlations in excess of .75 indicate a potential issue (Ashford & Tsui, 1991). An examination of the correlations between the predictor variables of the current study shows that they fall below this threshold except on two occasions. Benevolence and integrity showed correlation of .76 at Time 3 and .77 at Time 5. High correlations between these two factors have been reported by other studies but meta-analysis has confirmed their unique effects (Colquitt et al., 2007). Thus, multicollinearity was not considered to be an issue in the current study and further multicollinearity analysis was not deemed necessary.

5.9.3 Dyadic Data Structuring

Dyadic data requires several different data structures to accommodate specific data analysis tools and techniques (Kenny et al., 2006; Lederman & Kenny, 2015). This study employed three data structures: data entry structure, individual structure, and dyad structure.

The data entry structure facilitated data entry in the order the data were presented, that is, the full data provided by each participant (self-data and data in relation to each of two colleagues). This then allowed the translation of the respondent self-generated identifiers into anonymous respondent identifiers, matching partner identifiers, and company identifiers.

Following data cleansing and matching, the data were then restructured manually into an individual structure (long format). This involved the allocation of a unique dyad identification variable to link the two members of the dyad, and the reordering of the data into dyad order rather than data entry order. In this data structure, there is one row for each dyad member, thus two rows for each dyad. This data structure was required to carry out scale reliabilities, descriptive statistics, and correlations.

Next, the same data were restructured into a dyad structure (wide format). In this data structure, there is one row for each dyad, which contains the data for both dyad members, thus the unit for this structure is the dyad, not the individual. This data structure was used to carry out intraclass correlations and all SEM analysis.

5.10   Data Analysis Strategy

Guided by the evaluation of dyadic data analysis methods carried out by Lederman and Kenny (2017), a structural equation modelling approach was chosen for the analysis of data within the current study based on the sample characteristics and the nature of the hypotheses. Structural equation modelling (SEM) is a multivariate method which blends confirmatory factor analysis (the measurement model) and path analysis (the structural model), using observed and unmeasured (latent) variables (Williams et al., 2009; Zyphur et al., 2023). It evaluates the goodness of fit of an estimated model by comparing estimated model parameters (i.e., factor loadings and path coefficients) with values generated from the sample. Given the profile of missingness in the data, SEM provides a strong solution, using full information maximum likelihood (FIML). SEM offers the advantages of latent variable analysis which accounts for measurement error. SEM is also appropriate for the analysis of indistinguishable dyad members (Woody & Sadler, 2005).

The following sections provide additional detail on the key data analysis considerations and choices. First, the adequacy of the statistical power of the sample for SEM analysis and for dyadic and longitudinal research is confirmed. Second, the importance of providing statistical evidence of data nonindependence in dyadic data analysis is highlighted. Third, the approach taken to model estimation including the selection of suitable model fit indices is described. Fourth, the methodology employed in confirmatory factor analysis is presented. Fifth, the approach to the establishment of measurement invariance in the longitudinal data is described. The section then concludes with an outline of the specific statistical techniques chosen for hypothesis testing.

5.10.1 Statistical Power

Statistical power is an important consideration in quantitative data analysis. Statistical power refers to the probability of detecting an effect in a sample that indeed exists in the population (Cohen, 1988, 1992). Within null hypothesis significance testing, statistical power is the probability of correctly rejecting a false null hypothesis, thus avoiding a Type II error whereby relationships that exist are not detected. The power of a significance test is influenced by the size of the sample (i.e., the greater the sample size, the greater the power), the strength of the relationship between variables (i.e., the greater the effect, the greater the power), and the statistical threshold chosen for a relationship to be deemed significant. A higher significance threshold increases statistical power but also increases the probability of a Type I error, whereby effects can be detected in the sample that do not exist in the population. In organisational and social sciences, significance thresholds of .01 and .05 are usually applied, although less rigorous thresholds such as .10 are sometimes adopted in small samples or in exploratory research (Aguinis & Harden, 2009). Significance thresholds of both .01 and .05 are reported in the current study.

It is not possible to be definitive on the sample size requirement in SEM analysis because it is influenced by several factors including the complexity of the structural and measurement models, the methods used for parameter estimation, the reliability of the measures, and the amount of missing data (Kline, 2016; Muthén & Muthén, 2002). Power analysis is rarely reported in current relationship and organisational research which commonly relies on rules-of-thumb to establish levels of statistical power (Tonidandel et al., 2015). A typical rule of thumb applied to SEM analysis involving latent variables is 200 cases, with a minimum of 100 cases involving very simple models, and greater than 200 cases required for more complex models (Kline, 2016, p. 15). This corresponds to a requirement for 200 dyads in dyadic analysis, although 100 dyads could suffice depending on the sample and the analysis employed (Lederman & Kenny, 2017). In dyadic data

analysis, nonindependence of observations of the two dyad members can decrease statistical power, so the number of dyads is the appropriate measure rather than the number of individuals. However, research design involving indistinguishable dyads (such as the current study) can be beneficial to statistical power as estimates are pooled within dyad members which increases precision (Kashy et al., 2008). In addition, longitudinal research adds data points to the sample which can increase statistical power (Ployhart & Ward, 2011).

Statistical power has historically been low in relationship science examining dyadic phenomena (Finkel et al., 2015). However, more recent dyadic studies in the fields of both relationship science and organisational science which employ structural equation modelling have reported sample sizes of close to 200 dyads. For example, in a cross-sectional study of relationship closeness in heterosexual couples, Iida et al. (2018) studied a sample of 201 dyads using the actor-partner interdependence model (APIM; Kenny et al., 2006) and SEM. Similarly, a study on attachment and trust within heterosexual couples (Fitzpatrick & Lafontaine, 2017) used a sample of 199 dyads and an APIM approach within SEM.

In relation to longitudinal research design, recent non-dyadic studies using SEM and latent growth modelling (LGM) have utilised sample sizes close to 200 individuals. For example, van der Werff and Buckley (2017) employed LGM to study a sample of 193 organisational newcomers over four time points. Similarly, Vandenberghe et al. (2019) applied LGM to a sample of 158 organisational newcomers over four time points. Longitudinal dyadic studies are less common. One dyadic five-day study on daily reciprocal trust spirals between coworkers (Halbesleben & Wheeler, 2015) used a SEM latent change score model with a sample of 177 coworker dyads.

Thus, the size and profile of the sample in the current study (230 indistinguishable coworker dyads across five time points) is in line with general SEM guidelines and recent research trends. From a rule-of-thumb perspective, the current sample is considered to provide sufficient statistical power for the data analysis techniques employed.

5.10.2 Data Nonindependence

The most fundamental consideration in dyadic data analysis is that of nonindependence (Kenny et al., 2006; Krasikova & LeBreton, 2012). Conceptually, this implies that the relationship between scores from two members within a dyad is likely to be stronger than the relationship between scores from two people who are not members of a dyad. Dyadic nonindependence arises from the interaction between two individuals which generates a reciprocal and shared experience. The nonindependence of the observations in dyadic data is further complicated when the dyadic variables are measured repeatedly over time. With dyadic longitudinal data, dependence within the repeated measures of each dyad partner (i.e., within subject) must be considered in the statistical analysis, in addition to dependence within the data of both dyad partners (i.e., within dyad). Nonindependence of data has implications for statistical analysis as most common methods (e.g., analysis of variance and OLS regression) assume independence between observations. Statistically, the consequences of ignoring nonindependence are biased results of significance testing and increased Type I and Type II errors (Kenny et al., 2006; Krasikova & LeBreton, 2012). Consequently, the methods selected for the data analysis in the current study take the nonindependence of observations into account.

The nonindependence within the data of the current sample is confirmed statistically in advance of subsequent dyadic data analysis. For distinguishable dyads, the calculation of an interclass (Pearson) correlation coefficient can demonstrate nonindependence. However, as the order of the members is assigned randomly for indistinguishable dyads such as those of the current sample, an interclass correlation is not appropriate (Kenny et al., 2006). Instead, the calculation of an intraclass correlation coefficient (ICC) is recommended for indistinguishable dyads, as the order of the members does not influence this calculation. The current study calculates a one-way random, single score ICC (Kenny et al., 2006, p. 34) for each dyadic variable in order to justify a dyadic level of analysis.

5.10.3 Model Estimation Parameters and Model Fit Indices

Structural equation modelling (SEM) involves evaluating the goodness of fit of a predicted model by comparing estimated model parameters with values generated from the sample. Maximum likelihood (ML) describes the statistical principles and methods used to derive the parameter estimates which maximise the likelihood that the observed data covariances are drawn from the population (Kline, 2016). ML assumes normal distribution of data in order to produce the most unbiased and efficient estimates and is the most commonly used estimation method in SEM. All the SEM techniques employed in the current research use the ML estimation method.

A large range of fit indices is available for assessing model fit. Kline (2016) recommends that a minimum set of four fit statistics should be reported consisting of one model test statistic (the chi-square significance test) and three approximate fit indices: the root mean square error of approximation (RMSEA; Steiger, 1990), the standardised root mean square residual (SRMR), and the comparative fit index (CFI; Bentler, 1990). All four are reported in the current study, in addition to the Tucker-Lewis fit index (TLI; Bentler & Bonett, 1980) and two predictive fit indices: the Akaike information criterion (AIC; Akaike, 1974) and the Bayes information criterion (BIC; Raftery, 1995).

The chi-square statistic (χ^2) assesses overall model fit and the discrepancy between the sample and predicted covariance matrices. A statistically significant chi-square ($p<.05$) indicates lack of fit meaning that the predicted model is a poor representation of the sample data. However, the chi-square is sensitive to sample size such that larger samples (>200) have a greater chance of obtaining a statistically significant chi-square. Notwithstanding this limitation, the chi-square statistic itself can be a useful measure of model fit as it enables comparison between models, where higher values of chi-square indicate relatively poorer model fit. Another frequently used measure of model fit is the relative chi-square (or normed

chi-square), which is less sensitive to sample size. In recent times this approach has attracted criticism and is no longer recommended by many methodologists (e.g., Kline, 2016), thus it is not employed in the current study.

In addition to the model chi-square, several other commonly reported indices are employed in the current study, each providing different information about model fit. Some of these are "goodness of fit" measures where higher values indicate better fit, whereas others are "badness of fit" measures where higher values indicate worse fit (Kline, 2016). The CFI is an incremental goodness of fit index which compares the fit of a hypothesised model to a baseline null model which assumes zero covariances (i.e., a model with the worst fit), and produces values in the range from 0 to 1, where 1 indicates the best possible result. CFI values of greater than .95 indicate good model fit (Hu & Bentler, 1999) and values greater than .90 indicate acceptable model fit (Kline, 2016), such that the hypothesised model fits 90% better than the baseline model. Similarly, the TLI is an incremental goodness of fit index where threshold values of greater than .95 indicate good model fit (Hu & Bentler, 1999). Both RMSEA and SRMR are absolute badness of fit indices which assess how far a hypothesised model is from a perfect model, where a value of zero indicates the best possible result. RMSEA values of less than .06 and SRMR values of less than .08 are generally accepted to indicate good model fit (Hu & Bentler, 1999). AIC and BIC are predictive fit indices that combine model chi-square and model complexity parameters. Rather than having absolute cut-off values, they are used to compare models where relatively lower values indicate better model fit (Kline, 2016).

There is considerable controversy about the application of model fit indices and cut-off-values, with some researchers suggesting that they are generally not well understood or interpreted correctly (Landis & Cortina, 2015). Structural equation modelling provides great flexibility for testing statistical models but consequently brings greater ambiguity in methods and rules. Most methodologists support the value of model fit indices but advise against a

strict application of thresholds (e.g., Marsh et al., 2004), highlighting the limitations noted by Hu and Bentler (1999). Rather than selective reporting of specific indices that meet commonly advised thresholds, the general advice is to report the results of several commonly used indices. All statistical models are imperfect to some degree, however the use of several indices brings transparency and sensitivity to the data analysis, which should be guided more by theoretical foundations than by statistical considerations (Kline, 2016).

5.10.4 Confirmatory Factor Analysis Approach

Factor analysis is one of the oldest statistical techniques for investigating the relationship between a set of observed variables (i.e., individual scale items or indicators) and their underlying unobservable (latent) constructs. Confirmatory factor analysis (CFA) plays an essential role in SEM measurement model validation and is the foundation of all subsequent hypothesis testing involving latent variables (Brown & Moore, 2012; Jackson et al., 2009). CFA shows how individual items relate to one unique latent variable (factor loading) in a consistent overall data structure (model fit). CFA entails the specification in advance of both the number of latent factors in a data set and the factor loadings (i.e., the regression slopes for predicting each indicator from the factor). CFA is suitable when using theoretically established concepts and empirically validated measurement scales (Hurley et al., 1997). As all the measurement scales used in the current study have been developed and validated in prior research studies, CFA is the factor analysis method employed.

CFA demonstrates both convergent and discriminant validity of theoretical constructs (Brown & Moore, 2012). Convergent validity shows that observed variables belonging to one unique latent variable (i.e., loading onto the same factor) are highly intercorrelated because they are influenced by the same underlying construct. Discriminant validity shows that observed variables belonging to different latent variables (i.e., loading

onto separate factors) are not highly intercorrelated because they are influenced by distinct psychological concepts. CFA has an advantage over traditional analytic methods such as correlation and OLS regression in that it accounts for measurement error (Kline, 2016). For each indicator, CFA identifies the variance shared with other indicators (common variance) and the variance specific to the indicator (unique variance). Unique variance (also called error variance) consists of two components: specific variance not explained by any factor in the model and random measurement error including common method variance. CFA model specifications can allow covariance between error variances (also called correlated residuals or correlated errors) to explain shared influences on the indicators other than the latent factor and shared measurement error, where they are theoretically justified (Landis et al., 2009). CFA models can also specify covariance between the latent factors to acknowledge a relationship between the latent dimensions (Jackson et al., 2009).

CFA involves the specification of three types of parameters: fixed, free, and constrained (Brown & Moore, 2012). A fixed parameter is pre-specified (known), most commonly as either 1 or 0. For example, factor loadings are set to 1 when specifying that an item is an exact indicator of the latent variable and are set to 0 when specifying that there is no cross-loading of an item onto additional latent factors. A free parameter is unspecified (unknown) and allows the model estimation process to find its optimal value. A constrained parameter is also unknown, but restrictions are placed on the value that the estimation process may calculate. For example, equality constraints restrict parameters estimates to be equal in value. The difference between the number of known parameters (i.e., sample variance/covariance matrix) and unknown parameters in a model constitutes the model's degrees of freedom (df). When df are positive, there is enough information in the data to estimate the free parameters (model over-identification). Fewer degrees of freedom generally result in better model fit results. In contrast, when the df are negative, there is insufficient data to estimate the free parameters (model under-identification). In this case,

the number of unknown free parameters needs to be reduced by fixing or removing some of them.

The CFA statistical process attempts to obtain estimates for each parameter of the measurement model that produce a predicted variance-covariance matrix that resembles that of the sample as closely as possible (Brown & Moore, 2012). This estimation process entails a fitting function such as the maximum likelihood (ML) method which is employed in the current research and has been outlined in the previous section. Model estimation is an iterative process which is carried out until model convergence is reached, whereby the optimum set of parameter estimates are produced. In applied research, it is generally advised to test and compare several models, and more than one model is usually reported. Several measurement models are tested and reported in the next chapter.

5.10.5 Measurement Invariance Approach

Assessment of measurement invariance is an important prerequisite for the analysis of change over time in longitudinal research (Vandenberg & Lance, 2000). Measurement invariance (also known as measurement equivalence) must be examined to ensure that respondents have maintained a consistent understanding of a construct across repeated time points. Measurement invariance testing ensures that absolute alpha change is identified separately from beta and gamma change which are changes in fundamental conceptualisation (Chan, 2003; Golembiewski et al., 1976).

Measurement invariance is tested in the current study using confirmatory factor analysis, which is the most frequently employed method in organisational research (Vandenberg & Lance, 2000). Within an SEM approach, this involves creating a multiple-group confirmatory factor analysis model to examine the relations between observed indicators (i.e., the items in a scale) and latent constructs, and comparing the model fit of

constrained and unconstrained models. Following guidelines proposed by several researchers (e.g., Cheung & Lau, 2012; Ployhart & Vandenberg, 2010; Vandenberg & Lance, 2000), measurement invariance testing in the current study is conducted in three steps. Firstly, configural invariance testing is carried out to establish that the same items load onto the same factors across every time point. Secondly, metric invariance testing is performed to establish that the factor loadings are consistent over time. Finally, scalar invariance testing is carried out to demonstrate that the item intercepts are consistent over time. In practice, full metric and scalar invariance is not always achieved, and the use of less restrictive parameters to establish partial invariance is commonly acceptable (Cheung & Lau, 2012; Vandenberg & Lance, 2000), Nevertheless, measurement invariance testing is essential in advance of hypothesis testing to ensure that the meanings of the constructs of interest are sufficiently stable over time and are suitable for longitudinal data analysis.

5.10.6 Approach to Hypothesis Testing

The actor-partner interdependence model (APIM; Kenny et al., 2006) is used to examine reciprocal effects within the dyads. The APIM, which is the most dominant model in dyadic research (Iida et al., 2023; Lederman & Kenny, 2017), retains individual measures nested within dyads. It examines the effects of a dyad member's characteristics on both their own outcomes and on the outcomes of the other dyad member. The potential of this model for the study of reciprocal trust has been highlighted by trust researchers (Ferrin et al., 2007, 2012; Lee et al., 2023).

A dyadic latent growth model approach is employed to examine changes in trust over time. Growth curve models simultaneously analyse both within-person effects (i.e., individual change trajectories over time) and between-person effects (i.e., comparing differences in the change trajectories across people) (Singer & Willett, 2003). In SEM, the

latent growth model approach (Bollen & Curran, 2006; Meredith & Tisak, 1990; Singer & Willett, 2003) has several advantages (Ployhart & Vandenberg, 2010). It combines the measurement model of confirmatory factor analysis and structural model testing, allowing model constraints to be carried into the actual LGM estimates of latent intercept (initial status) and latent slope (change) variables. In addition, it accounts for measurement error in the estimation process. As well as estimating linear change, latent growth curve models can also estimate non-linear turning points. Latent growth models can be applied to dyadic data (Iida et al., 2023; Kenny et al., 2006; Lederman & Kenny, 2017). In the broader psychology literature, several empirical studies have examined change over time in indistinguishable dyads using LGM (e.g., Kashy et al., 2008; Peugh et al., 2013). Due to the advantages and flexibility of a SEM CFA approach using latent variables, dyadic latent growth modelling was selected as the most appropriate method to test the hypotheses that are proposed in the current study which examine change over time.

Finally, the impact of trust incongruence is analysed using a combination of dyadic latent variables and difference scores (absolute differences). By including both dyadic trust level and trust difference score, the problems of bias that can occur when using difference scores alone are avoided. Using latent variables with multiple items for each construct within a SEM framework addresses the problem of measurement error.

5.11   Chapter Summary

This chapter presented the philosophical foundations of this research and detailed the methodological techniques that were used to analyse the data. The core components of the research design were specified, including details of the survey instrument employed. The characteristics of the research sample were described. The data collection procedures were documented in detail and the data preparation and data analysis strategies were outlined. The next chapter covers the detailed data analysis undertaken and the outcomes of this analysis.

6. Results

6.1   Introduction

The purpose of this chapter is to present a detailed description of the execution and results of the data analysis strategy outlined in the previous chapter. It begins with a quantification of the level of nonindependence in the data sample in order to justify a dyadic data analysis approach. It then presents the results of measurement model estimation and confirmatory factor analysis. The results of measurement invariance testing are then reported. This is followed by a descriptive statistics section where the characteristics of the sample including correlation analyses of the relationships between the study variables are reported and discussed. The final section then reports the results of the hypothesis testing with three sub-sections: dyadic trust reciprocity (actor-partner interdependence model); dyadic longitudinal trust development (dyadic latent growth model); and dyadic trust congruence (moderation analysis).

Descriptive statistics and preliminary analyses were performed using IBM SPSS Statistics for Windows, Version 27. Structural equation modelling, dyadic data analysis and hypothesis testing were carried out using Mplus software version 8.4 (Muthén & Muthén).

6.2   Evidence of Data Nonindependence

In individual-level analysis the scores from each individual are assumed to be independent from other individual observations. However, in dyadic data, the scores from two individuals in a dyad are likely to be more correlated with each other than with scores from individuals in other dyads. Thus, dyadic data has a level of nonindependence between the observations of the two individuals within the dyad. The level of nonindependence

between the individual observations in the current data sample was examined in order to justify a dyadic level of analysis and the selection of dyadic statistical techniques.

A one-way random, single score ICC (Kenny et al., 2006, p. 34) was calculated for each dyadic variable in the dyad at Time 1. This calculation is equivalent to the ICC(1) calculation specified by Bliese (1998, 2000), among others. It measures the degree of similarity between the dyad members by providing an estimate of the shared variance that can be attributed to membership of the dyad. It is calculated using an ANOVA technique where the higher-level grouping variable (the dyad) is the independent variable, and the dyadic construct is the dependent variable. ICC(1) values greater than zero indicate that there is similarity in responses among members of the same group (dyad) which might be nonignorable, thus group (dyad) membership might be relevant to the data analysis (Krasikova & LeBreton, 2019; LeBreton & Senter, 2008). The dispositional variable (propensity to trust) was excluded from this analysis as there is no theoretical reason that this should demonstrate nonindependence. The results of the ICC(1) calculations are shown in Table 6.1.

The dyadic ICC(1) estimates all differed significantly from zero, confirming a dyadic structure to the data. The dyadic ICC(1) estimates (ranging from .14 to .34 for all the variables) were high enough to justify a dyadic level of analysis. ICC(1) values of .01 can be considered as a ''small'' effect, values of .10 as a ''medium'' effect, and values of .25 as a ''large'' effect (Le Breton & Senter, 2008). For example, in the current sample, 34% of the variability in trust (disclosure) individual responses can be explained by membership of the dyad, which can be considered as a large effect. In contrast, 17% of the variability in trust (reliance) individual responses can be explained by membership of the dyad, which can be considered as a medium effect.

Table 6.1

Intraclass Correlations

Variable	ICC(1)
Trustworthiness (ability)	.20**
Trustworthiness (benevolence)	.33**
Trustworthiness (integrity)	.14*
Trust (reliance)	.17**
Trust (disclosure)	.34**
ICB (task-focused)	.17**
ICB (person-focused)	.28**

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

Dyadic ICC results at Time 1 provided some preliminary evidence of reciprocity and symmetry within dyads. Trust disclosure intentions ($r = .34$) showed higher intraclass correlations than trust reliance intentions ($r = .17$). This suggests that disclosure intentions within the sample dyads are at more mutual levels than reliance intentions. Trustworthiness benevolence assessments ($r = .33$) showed higher intraclass correlations than ability ($r =.20$) or integrity assessments ($r =.14$), suggesting that benevolence assessments are more mutual than ability or integrity assessments. In addition, interpersonal citizenship behaviours within the dyad showed higher intraclass correlations for person-oriented behaviours ($r =.28$) than for task-oriented behaviours ($r =.17$).

6.3   Measurement Model Estimation and CFA Results

A series of CFA models were performed using Time 1 data to further examine the validity of the scales employed and to determine the optimal model fit. Section 5.10.3 of the previous chapter described in detail the range of test statistics employed in the current study to assess model fit, including the chi-square significance test, RMSEA, SRMR, CFI, TLI, AIC, and BIC. The hypothesised model in this study contains eight factors: propensity to trust, trustworthiness (ability, benevolence, integrity), trust (reliance and disclosure), and

interpersonal citizenship behaviours (task-focused and person-focused). This eight-factor model is based on established measurement scales and previous theoretical and empirical research. It was compared to more constrained models with fewer factors, enabled by combining some of the scales, with the results shown in Table 6.2.

Table 6.2

Model Fit Statistics for CFA Model Comparisons

	Model	χ^2	*df*	RMSEA	SRMR	CFI	TLI	AIC	BIC
1.	**8 Factor** *-Trust x 2* *-Trustw x 3* *-ICB x 2* *-PTT*	1293.96***	566	.05	.05	.92	.91	30352.49	30914.34
2.	**7 Factor** *-Trust* *-Trustw x 3* *-ICB x 2* *-PTT*	2179.52***	573	.08	.07	.83	.81	31224.05	31756.98
3.	**5 Factor** *-Trust* *-Trustw* *-ICB x 2* *-PTT*	3040.02***	584	.08	.10	.74	.72	32062.55	32550.04
4.	**4 Factor** *-Trust* *-Trustw* *-ICB* *-PTT*	3486.08***	588	.08	.11	.69	.67	32500.61	32971.57
5.	**1 Factor** *All scales combined*	4815.02***	594	.11	.12	.55	.52	33817.56	24263.73

***p < .001.

The eight-factor target model achieved optimal model fit compared to the alternative models tested. While the chi-square was significant (p<.01), this was attributed to sample size. Chi-square, AIC and BIC were all comparatively better in the target 10-factor model. Other indices of the eight-factor model indicated good model fit according to accepted cut-off values (RMSEA <.06 ; CFI/TLI > .90; SRMR <.08), all of which deteriorated in the alternative models tested. Similar results were found across all subsequent data collection time points, shown in Table 6.3. This provides further evidence for the validity of the

measurement model and the independence of all the measurement scales and related constructs used in the study.

Table 6.3

Model Fit Statistics for all Time Points

	Model	N	$\chi 2$	*df*	RMSEA	SRMR	CFI	TLI	AIC	BIC
1.	8 Factor Time 1	460	1293.96***	566	.05	.04	.92	.91	30352.49	30914.34
2.	8 Factor Time 2	421	1400.32***	566	.06	.05	.91	.90	23360.29	23910.09
3.	8 Factor Time 3	323	1282.67***	566	.06	.06	.90	.89	16511.86	17025.62
4.	8 Factor Time 4	314	1281.78***	566	.06	.05	.92	.91	15789.24	16299.15
5.	8 Factor Time 5	314	1266.08***	566	.06	.05	.93	.92	15041.46	15551.38

***p < .001.

The modification indices of the eight-factor target model suggested that several correlated residuals could be specified to improve model fit. Allowing the correlation of residual items implies shared influences on the indicators other than the latent factors specified. However, this practice has been criticised as being post-hoc and data driven, leading to capitalisation on chance of sample-specific characteristics that are not representative of the population (Landis et al., 2009). Taking these criticisms into account, the original predicted CFA model without modification was adopted.

6.4   Measurement Invariance Testing

The establishment of the presence of measurement invariance (or measurement equivalence) is necessary before longitudinal change over time can be analysed (Vandenberg & Lance, 2000). This is to ensure that there has been a consistent understanding of a construct across all time points, and that meaningful and genuine change can be measured. In the current study, longitudinal trust (reliance and disclosure) is examined over five time points, thus the presence of measurement invariance is necessary to confirm that the understanding of trust by the participants remains the same over the course of the study.

Measurement invariance was evaluated in the current study in a CFA framework. Statistical tests of invariance followed a sequence of increasingly stringent tests as outlined in a landmark study by Vandenberg and Lance (2000). This involved a series of nested models and tests of configural invariance, metric invariance, and scalar invariance, which are the three most commonly applied steps in practice (Putnick & Bornstein, 2016; Schmitt & Ali, 2015; Schmitt & Kuljanin, 2008). Model fit results of each step are shown in Table 6.4. In addition to assessing overall goodness-of-fit indices for each test, incremental goodness-of-fit indices were compared between nested models. A significant change in chi-square ($\Delta\chi2$), also known as the likelihood ratio test (LRT; Bollen, 1989), is a commonly used test to indicate measurement invariance. A change in the comparative fit index (ΔCFI) of greater than .01 (Chen, 2007; Cheung & Rensvold, 2002) is also frequently examined to indicate lack of measurement invariance in a nested model. Chen (2007) also recommended examination of change in RMSEA (cut-off greater than .015) and change in SRMR (cut-off greater than .030 for metric invariance and greater than .010 for scalar invariance). Table 6.4 also specifies each of these change indices.

Table 6.4

Measurement Invariance Tests for Longitudinal Trust

	Model	$\chi2$	*df*	RMSEA	SRMR	CFI	TLI	AIC	BIC	Δ $\chi2$	Δ *df*	Δ CFI	Δ RMSEA	Δ SRMR
1.	Configural Invariance	2267.90***	1030	.051	.061	.909	.891	30284.79	31503.50	-	-	-	-	-
2.	Metric Invariance	2311.42***	1062	.051	.064	.908	.893	30264.32	31350.83	+43.52	+32	-.001	.000	+.003
3.	Scalar Invariance	2355.29***	1094	.050	.065	.907	.896	30244.18	31198.49	+43.87	+32	-.001	-.001	+.001

***p < .001.

Firstly, a test of configural invariance examined if the two-factor structure of trust existed consistently over time. A multi time point CFA was conducted with freely estimated factor loadings which were not constrained to be equal across occasions. Also, covariance of error residuals was estimated for items across time points to allow for common influences. This produced an acceptable model fit ($\chi2$ (1030) = 2267.90, p < .001, RMSEA = .05, SRMR = .06, CFI = .91, TLI = .89, AIC = 30284.79, BIC = 31503.50) which indicated that the basic organisation of the two constructs (i.e., 5 loadings on each of the two latent factors) exists at every time point, thus configural invariance was established.

Secondly, a test of metric invariance was examined by constraining factor loadings for each indicator to be equal across time points. Model fit was acceptable ($\chi2$ (1062) = 2311.42, p < .001, RMSEA = .05, SRMR = .06, CFI = .91, TLI = .89, AIC = 30264.32, BIC = 31350.83) and was compared to the configural invariance model. The decrease in chi-square was 43.52(df=32) which was not significant (p>.05). A change of .001 was observed in the CFI, which was below the .010 cut-off (Chen, 2007; Cheung & Rensvold, 2002). No change was observed in the RMSEA. A change of .003 was observed in the SRMR which was below the .030 cut-off for metric invariance (Chen, 2007). Both the AIC and BIC were slightly better in the more restricted metric model (AIC = 30264.32; BIC = 31350.83) than

the configural model (AIC = 30284.79; BIC = 31503.50). These comparisons can be taken as evidence of the presence of metric invariance in the measurement of trust across all time points in the current sample.

Finally, a test of scalar invariance was examined by constraining the intercept for each indicator to be equal across time points. Model fit was acceptable ($\chi 2$ (1094) = 2355.29, p < .001, RMSEA = .05, SRMR = .07, CFI = .91, TLI = .90, AIC = 30244.18, BIC = 31198.49) and was compared to the metric invariance model. The decrease in chi-square was 43.87 which was not significant (p>.05). A decrease of .001 was observed in the CFI, which was below the .010 cut-off (Chen, 2007; Cheung & Rensvold, 2002). A change of .001 was observed in the RMSEA, which was below the .015 cut-off (Chen, 2007). A change of .001 was observed in the SRMR which was below the .010 cut-off for scalar invariance (Chen, 2007). Both the AIC and BIC were slightly better in the more restricted scalar model (AIC = 30244.18; BIC = 31198.49) than the metric model (AIC = 30264.32; BIC = 31350.83). These comparisons can be taken as evidence of the presence of scalar invariance in the measurement of trust across all time points in the current sample.

In summary, the results of configural, metric, and scalar invariance tests provided evidence that the scales used to measure trust (reliance and disclosure) in the current research were sufficiently stable over time and suitable for longitudinal data analysis.

6.5   Descriptive Statistics

The means, standard deviations, and internal consistencies of all the study variables, along with the correlations between variables are reported in Table 6.5. The mean for trust reliance at Time 1 (4.29) is slightly higher than results from previous studies and the mean for trust disclosure at Time 1 (3.54) is in line with results from previous studies (shown in Table 6.6). Previous studies have generally found means for trust disclosure to be less than means for trust reliance, and this was also the case in the current study. The means of most variables in the current study were generally stable over time, exhibiting relatively small fluctuations across the time points. The largest mean change was displayed in trust disclosure which grew from 3.54 to 3.78 over the course of the study. The means of trust (reliance and disclosure) over time are illustrated graphically in Figure 6.1.

Correlation analysis demonstrates a significant positive relationship between each variable at Time 1 and its repeated measure at every subsequent time point, with values ranging from .51 to .76. The sub-scales of trust (reliance and disclosure) show significant intercorrelation at every time point, and this grows stronger over time, ranging from .42 (Time 1) to .44 (Time 2), .51 (Time 3), .55 (Time 4), and .59 (Time 5). Similarly, trustworthiness dimensions (ability, benevolence, integrity) also show significant intercorrelations at every time point which grow stronger over time, ranging from .45 to .77. Intercorrelations between ICB (task-focused and person-focused) are also significant at every time point and grow from .46 (T1) to .70 (T5).

Table 6.5

Descriptive Statistics and Correlations among Variables

		N	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	t1propensity to trust	449	3.78	0.69	(.84)																
2	t1ability	460	4.42	0.50	.11*	(.87)															
3	t1benevolence	460	3.90	0.60	.16**	.45**	(.85)														
4	t1integrity	460	4.13	0.56	.17**	.52**	.69**	(.83)													
5	t1reliance	460	4.29	0.63	.13**	.52**	.54**	.57**	(.87)												
6	t1disclosure	460	3.54	0.90	.14**	.22**	.49**	.35**	.42**	(.89)											
7	t1icb_task	459	3.78	0.78	0.09	.42**	.56**	.53**	.49**	.38**	(.86)										
8	t1icb_person	460	3.91	0.69	.12*	.31**	.65**	.50**	.43**	.63**	.46**	(.84)									
9	t2ability	361	4.44	0.54	.12*	.64**	.42**	.45**	.52**	.26**	.37**	.29**	(.91)								
10	t2benevolence	361	3.93	0.69	.11*	.32**	.66**	.50**	.43**	.50**	.43**	.49**	.51**	(.90)							
11	t2integrity	361	4.21	0.60	.11*	.40**	.57**	.69**	.50**	.37**	.43**	.42**	.58**	.71**	(.88)						
12	t2reliance	365	4.36	0.62	.17**	.47**	.52**	.51**	.65**	.32**	.49**	.37**	.67**	.60**	.65**	(.88)					
13	t2disclosure	365	3.72	0.84	.17**	.25**	.48**	.35**	.32**	.62**	.31**	.49**	.32**	.65**	.46**	.44**	(.89)				
14	t2icb_task	365	3.82	0.84	.11*	.32**	.50**	.45**	.47**	.30**	.61**	.34**	.47**	.62**	.57**	.59**	.44**	(.91)			
15	t2icb_person	365	3.93	0.73	.16**	.27**	.52**	.42**	.40**	.55**	.35**	.57**	.43**	.70**	.58**	.49**	.68**	.57**	(.82)		
16	t3ability	270	4.37	0.57	0.11	.59**	.37**	.44**	.41**	.29**	.35**	.37**	.70**	.47**	.50**	.47**	.48**	.42**	.48**	(.91)	
17	t3benevolence	270	3.97	0.72	0.09	.35**	.61**	.47**	.40**	.45**	.39**	.50**	.49**	.70**	.63**	.54**	.63**	.58**	.65**	.58**	(.91)
18	t3integrity	270	4.21	0.62	.14*	.41**	.50**	.61**	.43**	.34**	.40**	.41**	.52**	.57**	.73**	.55**	.50**	.53**	.56**	.61**	.76**
19	t3reliance	270	4.31	0.58	0.06	.50**	.44**	.45**	.59**	.24**	.43**	.38**	.55**	.52**	.57**	.64**	.48**	.60**	.49**	.67**	.65**
20	t3disclosure	270	3.78	0.85	0.06	.30**	.53**	.42**	.37**	.59**	.39**	.50**	.32**	.56**	.46**	.36**	.76**	.42**	.57**	.50**	.67**
21	t3icb_task	266	3.80	0.83	0.08	.32**	.45**	.45**	.45**	.30**	.60**	.45**	.43**	.55**	.56**	.47**	.49**	.71**	.55**	.50**	.61**
22	t3icb_person	266	3.94	0.69	0.02	.31**	.52**	.43**	.35**	.45**	.38**	.55**	.39**	.62**	.48**	.39**	.63**	.50**	.63**	.51**	.73**
23	t4ability	274	4.36	0.60	.14*	.65**	.36**	.47**	.42**	.20**	.38**	.32**	.64**	.39**	.47**	.56**	.31**	.34**	.32**	.62**	.36**
24	t4benevolence	273	3.82	0.74	.12*	.34**	.62**	.47**	.43**	.48**	.48**	.53**	.44**	.66**	.55**	.52**	.57**	.52**	.60**	.45**	.74**
25	t4integrity	273	4.15	0.66	.20**	.43**	.51**	.63**	.46**	.34**	.43**	.44**	.46**	.47**	.67**	.54**	.41**	.43**	.41**	.48**	.56**
26	t4reliance	278	4.29	0.63	.13*	.50**	.50**	.52**	.51**	.29**	.48**	.46**	.55**	.52**	.59**	.68**	.39**	.49**	.42**	.53**	.51**
27	t4disclosure	278	3.77	0.86	0.11	.26**	.54**	.41**	.40**	.63**	.39**	.58**	.31**	.51**	.40**	.40**	.69**	.34**	.56**	.41**	.60**
28	t4icb_task	278	3.80	0.78	.12*	.32**	.49**	.44**	.45**	.36**	.59**	.38**	.46**	.57**	.54**	.57**	.52**	.63**	.46**	.43**	.55**
29	t4icb_person	278	3.88	0.79	0.09	.25**	.54**	.39**	.43**	.56**	.40**	.58**	.34**	.54**	.41**	.45**	.62**	.46**	.69**	.40**	.63**
30	t5ability	276	4.36	0.58	0.10	.51**	.45**	.45**	.50**	.37**	.35**	.44**	.65**	.43**	.46**	.54**	.35**	.34**	.44**	.65**	.48**
31	t5benevolence	276	3.91	0.75	0.09	.30**	.62**	.46**	.42**	.58**	.41**	.55**	.46**	.65**	.53**	.49**	.57**	.44**	.52**	.41**	.66**
32	t5integrity	276	4.15	0.65	.15*	.41**	.55**	.60**	.42**	.38**	.39**	.46**	.50**	.51**	.67**	.50**	.36**	.42**	.43**	.47**	.55**
33	t5reliance	276	4.29	0.65	0.10	.47**	.48**	.47**	.53**	.35**	.38**	.47**	.60**	.49**	.53**	.61**	.42**	.44**	.47**	.58**	.59**
34	t5disclosure	276	3.78	0.85	0.08	.27**	.52**	.35**	.37**	.68**	.34**	.55**	.32**	.52**	.39**	.36**	.68**	.30**	.54**	.39**	.61**
35	t5icb_task	276	3.82	0.88	0.03	.26**	.42**	.35**	.36**	.36**	.52**	.38**	.41**	.51**	.44**	.43**	.43**	.54**	.46**	.35**	.56**
36	t5icb_person	276	3.84	0.80	0.03	.24**	.51**	.33**	.36**	.56**	.36**	.60**	.33**	.57**	.40**	.39**	.59**	.39**	.62**	.37**	.58**

** $p < .01$, ** $p < .05$

Coefficient alpha reliability estimates are in parentheses

167

Table 6.5

Descriptive Statistics (Continued)

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	#	
																			1	t1propensity to trust
																			2	t1ability
																			3	t1benevolence
																			4	t1integrity
																			5	t1reliance
																			6	t1disclosure
																			7	t1icb_task
																			8	t1icb_relationship
																			9	t2ability
																			10	t2benevolence
																			11	t2integrity
																			12	t2reliance
																			13	t2disclosure
																			14	t2icb_task
																			15	t2icb_person
																			16	t3ability
																			17	t3benevolence
(.89)																			18	t3integrity
.64**	(.85)																		19	t3reliance
.54**	.51**	(.90)																	20	t3disclosure
.59**	.64**	.53**	(.90)																21	t3icb_task
.60**	.55**	.68**	.61**	(.84)															22	t3icb_person
.45**	.53**	.28**	.34**	.27**	(.94)														23	t4ability
.59**	.54**	.60**	.55**	.60**	.48**	(.93)													24	t4benevolence
.72**	.55**	.51**	.48**	.42**	.65**	.71**	(.91)												25	t4integrity
.56**	.65**	.40**	.49**	.36**	.72**	.63**	.70**	(.90)											26	t4reliance
.50**	.46**	.69**	.47**	.54**	.42**	.70**	.62**	.55**	(.93)										27	t4disclosure
.55**	.58**	.50**	.69**	.47**	.48**	.69**	.65**	.63**	.60**	(.91)									28	t4icb_task
.53**	.50**	.61**	.47**	.62**	.42**	.76**	.59**	.54**	.77**	.68**	(.89)								29	t4icb_person
.54**	.58**	.34**	.37**	.39**	.72**	.51**	.62**	.67**	.48**	.52**	.53**	(.94)							30	t5ability
.55**	.43**	.57**	.49**	.55**	.47**	.75**	.60**	.59**	.69**	.67**	.68**	.61**	(.94)						31	t5benevolence
.70**	.50**	.41**	.47**	.42**	.58**	.60**	.76**	.68**	.52**	.62**	.57**	.72**	.77**	(.93)					32	t5integrity
.59**	.65**	.43**	.50**	.50**	.66**	.60**	.66**	.72**	.54**	.63**	.58**	.82**	.67**	.74**	(.92)				33	t5reliance
.48**	.37**	.71**	.42**	.57**	.36**	.64**	.53**	.46**	.75**	.54**	.69**	.55**	.74**	.59**	.59**	(.92)			34	t5disclosure
.48**	.48**	.41**	.64**	.52**	.41**	.57**	.52**	.52**	.54**	.72**	.56**	.54**	.72**	.63**	.65**	.57**	(.93)		35	t5icb_task
.44**	.40**	.56**	.49**	.64**	.40**	.61**	.48**	.52**	.67**	.53**	.73**	.57**	.79**	.61**	.61**	.74**	.70**	(.90)	36	t5icb_person

The correlations between trustworthiness dimensions and trust intentions are significant at every time point, and grow stronger over time, ranging from .22 (ability and disclosure T1) to .82 (ability and reliance T5). The correlations between trust intentions and interpersonal citizenship behaviours are also significant at every time point, with trust reliance showing slightly stronger correlations with task-focused ICB (increasing from .49 at T1) to .65 at T5), and with trust disclosure showing slightly stronger correlations with person-focused ICB (increasing from .43 at T1 to .82 at T5). The results also show that propensity to trust has weak significant correlations with trust (reliance and disclosure) at Time 1, but no significant correlations with these variables at Time 5.

The reliability of each scale is shown in parentheses in the diagonal of Table 6.5. Internal consistency was assessed using Cronbach's alpha. Most scales reported alphas greater than the recommended standard of .85 (Nunnally, 1978). The lowest alpha reported was .82, well exceeding the commonly accepted lower threshold of .70.

Table 6.6

Means for Trust (Reliance and Disclosure) in Previous Studies

Study	Referent	Trust Reliance	Trust Disclosure
Baer et al., 2021*	Coworker	3.61	3.26
Gillespie, 2003*	Supervisor	3.99	3.54
	Subordinate	4.13	3.70
	Peers	3.91	3.46
Holtz et al., 2020*	Supervisor	3.02	2.30
Lau et al., 2014	Supervisor (felt trust)	3.52	2.82
Lam et al., 2013	Supervisor	4.06	3.76
Qiu et al., 2022*	Coworker	3.96	3.40
	PhD Advisor	4.24	3.34
Tomlinson et al., 2020	Manager	4.01	3.46
	Peers	3.83	3.58
van der Werff & Buckley, 2017*	Coworkers – initial	3.46	2.94
	Coworkers – over time	3.92	3.55
Current Study	*Coworkers – initial*	*4.29*	*3.54*
	Coworkers – over time	*4.36*	*3.78*

* Rescaled from 7-point scale to 5-point scale for comparison purposes

Figure 6.1

Means for Trust (Reliance and Disclosure) Over Time
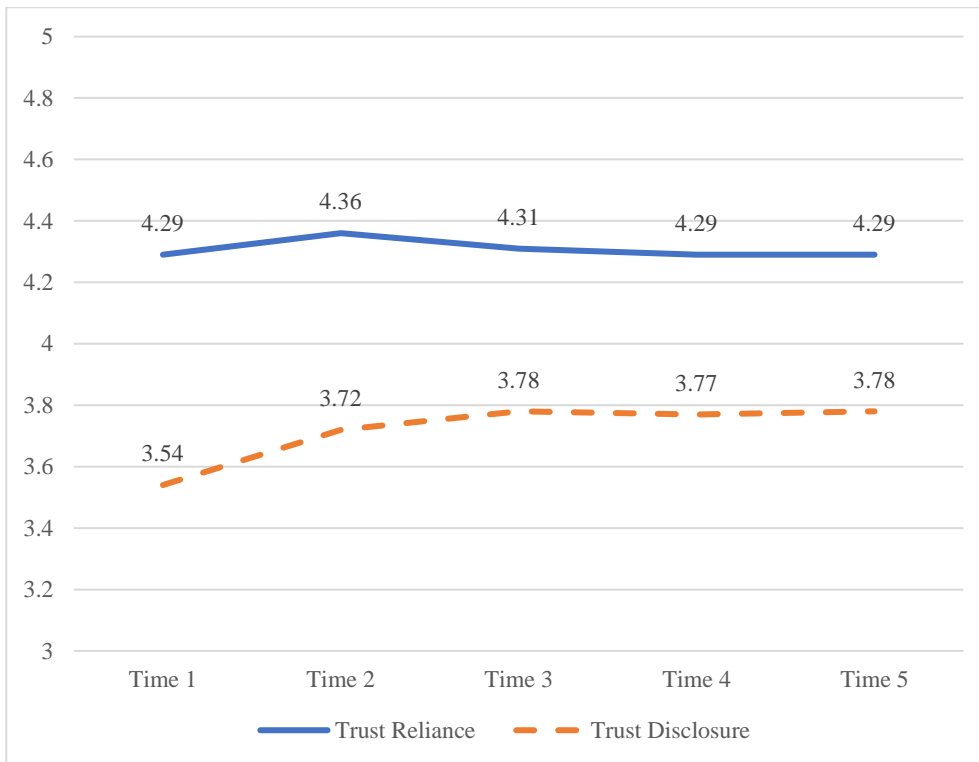
6.6   Structural Model and Hypothesis Testing

This section reports the analysis and results of the hypothesis testing carried out in the current study. The research hypotheses were proposed and discussed Chapter 4. The data analysis strategy and statistical methods chosen to analyse the data were outlined in Chapter 5. The results of the hypothesis testing are reported in three sub-sections. The first sub-section (6.6.1) examines trust reciprocity within the dyad (hypothesis 1 and 2) utilising the actor-partner interdependence model. The second sub-section (6.6.2) examines trust development over time within the dyad (hypothesis 3) utilising the dyadic latent growth model. The third sub-section (6.6.3) examines trust congruence within the dyad (hypothesis 4) employing moderation analysis.

6.6.1 Dyadic Trust Reciprocity

Reciprocity within the dyad was examined using the actor-partner interdependence model (Kenny et al., 2006), which was described in detail in section 5.10.6 of Chapter 5. Hypothesis 1 assessed the actor and partner effects of trustworthiness (ability, benevolence, integrity) on trust (reliance, disclosure). The effects of all three facets of trustworthiness (ability, benevolence, integrity) were estimated simultaneously, first on trust reliance, and then on trust disclosure. In line with previous APIM research (Kim & Kim, 2022), composite scores were used in this analysis to manage the number of parameters to be estimated.

For indistinguishable dyads, estimating the APIM requires imposing six equality constraints on the model parameters (Olsen & Kenny, 2006): equal means and variances of the causal variables, equal intercepts of the outcome variables, equal error variances, equal actor effects, and equal partner effects. This reflects the fact that the order of allocation of person 1 (actor) and person 2 (partner) is arbitrary, therefore it would be meaningless to estimate different actor and partner effects. This model with six equality constraints is called the "interchangeable and saturated" model (ISAT: Olsen & Kenny, 2006). The specified model is compared against this model rather than against the standard saturated model with zero degrees of freedom. Thus, the adjusted chi-square value is the difference between the chi square of the specified model and the chi square of the ISAT.

The results for hypothesis 1 are shown in Table 6.7. The results for trustworthiness (ability) showed actor but not partner effects for trust reliance, supporting hypothesis 1a. The results for trustworthiness (ability) showed neither actor nor partner effects for trust disclosure, as expected. The results for trustworthiness (benevolence) showed actor but not partner effects for trust reliance, partially supporting hypothesis 1b. The results for trustworthiness (benevolence) showed both actor and partner effects for trust disclosure, supporting hypothesis 1c. The results for trustworthiness (integrity) showed actor but not

partner effects for trust reliance, partially supporting hypothesis 1d. The results for trustworthiness (integrity) showed actor but not partner effects for trust disclosure, partially supporting hypothesis 1e.

Table 6.7

Influence of Trustworthiness on Dyadic Trust (Hypothesis 1)

Trustworthiness	Effects	Trust Reliance		Trust Disclosure	
		Estimate	Significance	Estimate	Significance
Ability	Actor	.355	.000	-.112	.236
Ability	Partner	-.001	.989	.115	.222
Benevolence	Actor	.246	.000	.679	.000
Benevolence	Partner	.006	.916	.171	.047
Integrity	Actor	.306	.000	.062	.510
Integrity	Partner	-.026	.653	.056	.553

In summary (Table 6.8), the results show that the impact of all three trustworthiness assessments (ability, benevolence, integrity) on trust reliance demonstrate significant actor effects but no reciprocal partner effects. With respect to trust disclosure, two trustworthiness assessments (benevolence and integrity) demonstrate significant actor effects (ability shows no actor effect), while reciprocal partner effects are found for trustworthiness benevolence (ability and integrity show no partner effect).

Table 6.8

Summary of Hypothesis 1 Testing (Influence of Trustworthiness on Trust)

Trustworthiness	Effects	Trust Reliance			Trust Disclosure		
		Expected	Results	Supported	Expected	Results	Supported
Ability	Actor	Y	Y	H1a ✓	N	N	-
Ability	Partner	N	N	-	N	N	-
Benevolence	Actor	Y	Y	H1b ✓	Y	Y	H1c✓
Benevolence	Partner	Y	N	H1b X	Y	Y	H1c✓
Integrity	Actor	Y	Y	H1d ✓	Y	Y	H1e ✓
Integrity	Partner	Y	N	H1d X	Y	N	H1e X

Hypothesis 2 assessed the actor and partner effects of trust (reliance, disclosure) on perceptions of interpersonal citizenship behaviour received (task-focused and person-focused ICB). The effects of both trust (reliance) and trust (disclosure) were estimated simultaneously, first on task-focused ICB, and subsequently on person-focused ICB. The results for hypothesis 2 are shown in Table 6.9

Table 6.9

Influence of Trust on ICB (Hypothesis 2)

Trustworthiness	Effects	Task-focused ICB		Person-focused ICB	
		Estimate	Significance	Estimate	Significance
Trust Reliance	Actor	.475	.000	.210	.000
Trust Reliance	Partner	.107	.047	.095	.025
Trust Disclosure	Actor	.164	.000	.400	.000
Trust Disclosure	Partner	.030	.451	.015	.638

The results for perceived task-focused ICB received from a partner show significant actor and partner effects from trust reliance, supporting hypothesis 2a. The results for perceived task-focused ICB received from a partner show significant actor effects from trust disclosure, and no significant partner effects, providing partial support of hypothesis 2b. Similarly, the results for perceived person-focused ICB received from a partner show significant actor and partner effects from trust reliance, supporting hypothesis 2c. The results for perceived person-focu ICB received from a partner show significant actor effects from trust disclosure, and no significant partner effects, providing partial support of hypothesis 2d. In summary (Table 6.10), the results show that both task-focused ICB and person-focused ICB behaviours are reciprocal as a result of trust reliance but not reciprocal as a result of trust disclosure.

Table 6.10

Summary of Hypothesis 2 Testing (Influence of Trust on Dyadic ICB)

Trust	Effects	Task-focused ICB			Person-focused ICB		
		Expected	Results	Supported	Expected	Results	Supported
Reliance	Actor	Y	Y	H2a ✓	Y	Y	H2b ✓
Reliance	Partner	Y	Y	H2a ✓	Y	Y	H2b✓
Disclosure	Actor	Y	Y	H2c ✓	Y	Y	H2d ✓
Disclosure	Partner	Y	N	H2c X	Y	N	H2d X

6.6.2 Dyadic Trust Change Over Time

Trust change over time was examined using a dyadic latent growth model approach which was introduced in Chapter 5. Hypothesis 3 proposed that changes in trust (reliance and disclosure) would be greater when initial trust was lower (3a), when relationships were newer (3b) and when communication was more frequent (3c). To examine trust change over time, latent growth models were fitted to trust (reliance) and trust (disclosure) in turn. Non-linear change was estimated by fixing the first two slope factor loadings to 0 and 1, but leaving the loadings for time 3,4, and 5 to be freely estimated (Biesanz et al., 2004). The parameter estimates for hypothesis 3a (change is greater when trust starting levels are lower) are shown in Table 6.11. Overall, these results can be interpreted as partial support for hypothesis 3a and show differences between trust reliance change and trust disclosure change.

While trust (reliance) showed no significant change over time, dyad initial levels varied significantly within the sample, and rate of change also varied significantly, that is, some dyads changed faster than others. The rate of change for trust (reliance) was significantly related to initial status, that is, those dyads at lower initial levels of trust (reliance) increased more over time. In contrast, trust (disclosure) showed significant change over time. However, while dyad initial levels varied significantly within the sample, the rate of change did not vary significantly, that is, dyads changed at the same rate regardless of

initial levels. Thus, the rate of change for trust (disclosure) was not significantly related to initial levels of trust.

Table 6.11

Dyadic Latent Growth Model Parameter Estimates (Hypothesis 3a)

Effects	Trust Reliance		Trust Disclosure	
	Estimate	Significance	Estimate	Significance
Mean Intercept	4.317	.000	3.614	.000
Mean Slope	-.004	.315	.022	.000
Variance Intercept	.262	.000	.503	.000
Variance Slope	.003	.000	.000	.661
Mean Intercept with Mean Slope	-.008	.008	-.001	.741

No support for found for hypothesis 3b or hypothesis 3c. Within this sample, trust change in newer relationships did not vary significantly from trust change in relationships of longer duration. In addition, communication frequency was not found to influence rates of trust change within this sample.

6.6.3   Dyadic Trust Congruence

Dyadic level means and mean differences for trust and interpersonal citizenship behaviour at Time 1 are shown in Table 6.12 below. The mean difference (incongruence) is calculated based on the absolute difference between the two dyad scores divided by 2. For example, the mean dyad level of trust (reliance) was 4.29, with a mean dyad difference of .31, indicating that within the sample, the mean of the higher scoring partner was 4.60 (4.29+.31), and the mean of the lower scoring partner was 3.98 (4.29-.31).

Table 6.12

Dyad Level Mean and Difference for Trust and ICB (Time 1)

Variable	Mean	Standard Deviation	Mean Difference*	Standard Deviation
Trust Reliance	4.29	.48	.31	.27
Trust Disclosure	3.54	.74	.42	.31
ICB Task	3.78	.59	.40	.31
ICB Person	3.91	.55	.32	.26

*Absolute difference divided by 2

To test the hypotheses that the influence of trust on ICB is stronger at lower levels of trust incongruence, a simple moderation analysis based on observed variables was carried out. The results are shown in table 6.13. Significant main effects ($p<.000$) were found for trust reliance and trust disclosure on both task-focused ICB and person-focused ICB. Moderating effects of trust incongruence were found only for trust reliance and person-focused ICB, supporting hypothesis 4b. These moderating effects for trust reliance and person-focused ICB are shown graphically in Figure 6.2. These results suggest that the influence of dyadic trust reliance on dyadic person-focused helping behaviour is stronger at higher levels of trust reliance incongruence. Results did not support hypotheses 4a (trust reliance incongruence and task-focused ICB), 4c (trust disclosure incongruence and task-focused ICB), or 4d (trust disclosure incongruence and person-focused ICB).

Table 6.13

Moderation Results for Trust Incongruence

Variables	Estimate	Significance
Trust Reliance -> ICB Task	.827	.000
Trust Reliance Incongruence -> ICB Task	1.168	.111
Trust Reliance * Incongruence -> ICB Task	-.290	.133
Trust Reliance -> ICB Person	.821	.000
Trust Reliance Incongruence -> ICB Person	2.018	.006
Trust Reliance * Incongruence -> ICB Person	-.461	.013
Trust Disclosure -> ICB Task	.327	.000
Trust Disclosure Incongruence -> ICB Task	-.561	.258
Trust Disclosure * Incongruence -> ICB Task	-.147	.307
Trust Disclosure -> ICB Person	.547	.000
Trust Disclosure Incongruence -> ICB Person	.303	.431
Trust Disclosure * Incongruence -> ICB Person	-.089	.427

Figure 6.2

Moderation Effects for Trust (Reliance) Incongruence and ICB Person

- - - LOW Trust Incongruence   ——— HIGH Trust Incongruence
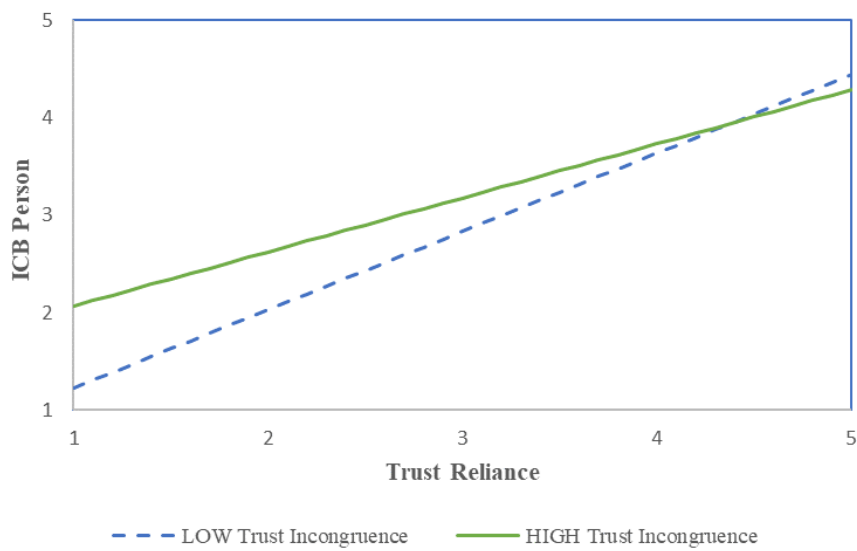
6.7 Chapter Summary

This chapter detailed the data analysis techniques executed in the current study and the results of the hypothesis testing that was carried out. It began with a estimate of the level of nonindependence within the data which provided statistical justification for a dyadic data analysis approach. It then presented the measurement model estimation and confirmatory factor analysis which provided confirmation of the stability of the factor structure of the sample. It also confirmed the stability of the factor structure over all time points and established the presence of measurement invariance for the variables of interest (trust reliance and trust disclosure). Following reporting and discussion of the descriptive statistics of the sample, the results of hypothesis testing were reported, providing evidence that trust is inherently dyadic and dynamic. The strongest reciprocal elements are the benevolence of both parties (influencing disclosure-based trust) and the reliance-based trust of both parties (influencing interpersonal helping). Trust can change in established relationships, especially disclosure-based trust. Trust is not necessarily balanced between the two parties, which can negatively impact the benefits of trust. These findings are discussed in further detail in Chapter 7.

7. Discussion

7.1 Introduction

The objective of this study was to examine the two-way nature of interpersonal trust and its development over time. Firstly, the study investigated the patterns of influence between the two parties in an exchange relationship. Drawing on theories of interpersonal relationships and trust, it was hypothesised that reciprocal influences would be evident between the trustworthiness (ability, benevolence, integrity), trust (reliance and disclosure) and interpersonal citizenship behaviours (task-focused and person-focused) of both parties. Secondly, the study examined changes in trust levels over time. It was hypothesised that more change would happen when trust started at lower levels, in newer relationships, and when there was more communication between the parties. Thirdly, the study analysed the impact of dyadic trust incongruence on dyadic interpersonal helping behaviours. It was hypothesised that higher levels of incongruence would have negative effects on the positive relationship between trust and helping. The findings of each of these hypothesis tests are discussed in the first section of this chapter.

Following the discussion of the research findings, the second section of this chapter discusses the contributions of this research. This includes contributions to understanding which aspects of trust are reciprocal, to identifying stability and change in forms of trust over time, and to estimating the impact of trust incongruence within a relationship. This second section concludes with a discussion of the overall contribution of the research to the field of organisational trust knowledge.

Finally, the concluding sections of this chapter identify implications for practice, acknowledge the limitations of this study, and offer recommendations for future research.

7.2   Research Findings

The results of this study have been presented in Chapter 6. This section discusses the results from each of the three categories of hypothesis testing: patterns of reciprocal trust (hypothesis 1 and 2), trust change over time (hypothesis 3), and trust incongruence (hypothesis 4).

7.2.1   Reciprocal Trustworthiness and Trust

Hypothesis 1 examined the reciprocal influences of each party in a relationship on the other (actor and partner effects; Kelley & Thibaut; 1978; Kenny et al., 2006). As each person is at once both a trustor and trustee, the terms actor and partner are used instead, following the tradition in dyadic theory and research studies. Actor effects describe how a single dyad member's outcomes depend on their own characteristics or psychological processes, in this instance, how each person's self-reported trustworthiness perceptions of another influence their trust intentions. This is what is examined in most single-sided individual-level trust research. Partner effects describe how the same characteristics (trustworthiness perceptions) reported by the other person (the partner) influence the outcomes (trust intentions) of the actor. These are the reciprocal effects that can be illustrated by two-sided dyadic trust research where both parties report on the same relationship variables in respect of each other.

As this research study did not differentiate between relationship members (treating them as theoretically and statistically indistinguishable), in each dyad there is just one actor effect and one partner effect for each variable. Taking an interdependence theory perspective, hypothesis 1 is examining the structure of the relationship and the basis of dependence, that is, how each member influences the other, and also the psychological

condition of transformation, that is, how much each member is concerned about the welfare and interests of the other member.

Hypothesis 1 examined the individual (actor) and reciprocal (partner) effects of trustworthiness on trust. It proposed that an actor's perception of a partner's trustworthiness (ability, benevolence, integrity) influences both their own and their partner's trust intentions (reliance, disclosure). Trust theory suggests that trustworthy people, in addition to being trusted, are also more trusting as they have strong expectations of reciprocity (Rotter, 1967, 1971; Whitener et al., 1998). However, five sub-hypotheses were specified in order to distinguish the influence of each sub-factor of trustworthiness on each sub-factor of trust. The significant effect pathways found are illustrated in Figure 7.1 and discussed in detail in the following paragraphs.

Figure 7.1

Dyadic Patterns of Influence (Trustworthiness Perceptions and Trust)
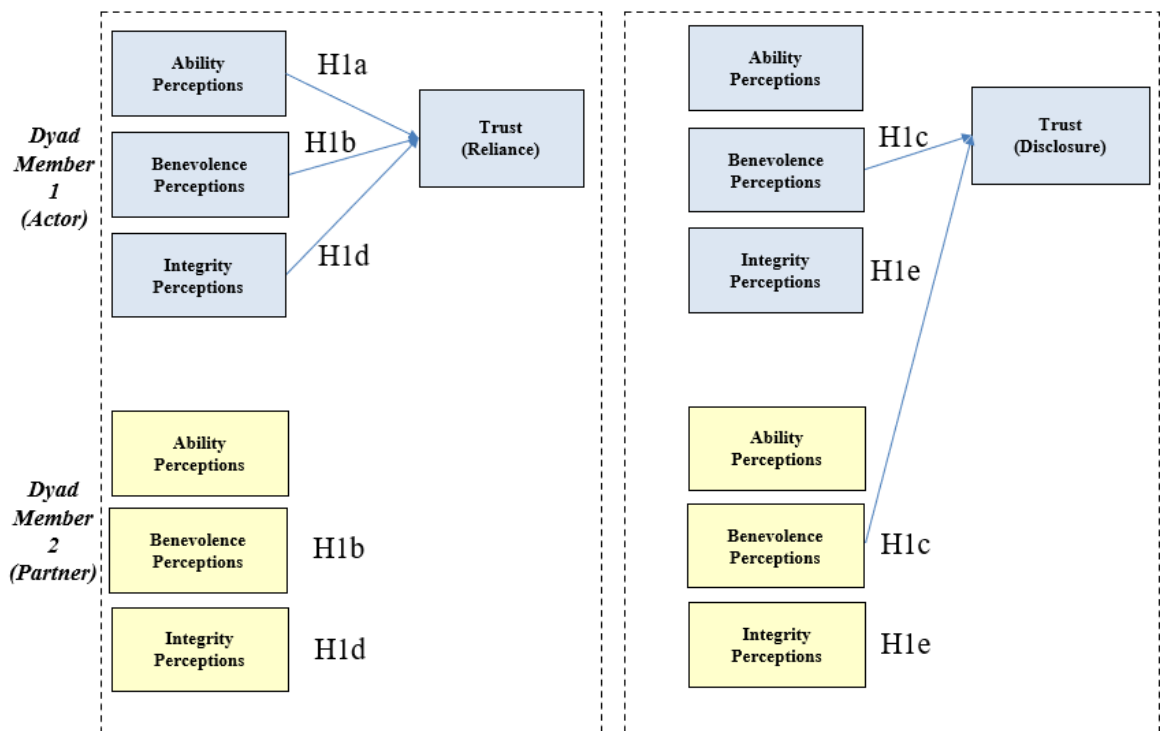
The first sub-hypothesis examined the effects of ability on trust reliance. Hypothesis 1a expected actor effects for ability on trust reliance. Partner effects for ability on trust reliance were not expected, and neither actor nor partner effects were expected of ability on trust disclosure. Hypothesis 1a was fully supported. Considering actor effects, the findings show that ability perceptions of a trustee by a trustor significantly influence trustor reliance intentions towards a trustee, but do not influence trustor disclosure intentions towards a trustee. Trust theory suggests that perceptions of ability influence trust and are largely cognitive in nature (Mayer et al., 1995; Schoorman et al., 2007). Previous single-sided empirical research has demonstrated that ability perceptions have a strong influence on trust reliance but a weaker influence on trust disclosure (Tomlinson et al., 2020; van der Werff & Buckley, 2017). The findings show no reciprocal partner effects for ability perceptions on either reliance or disclosure. This supports the findings of Yakovleva et al. (2010) who found no reciprocal partner effects for ability on trust. This study confirms that ability does not play a reciprocal role within a relationship, as while the ability of a trustee evokes trust from a trustor, it does not influence an exchange of trust by the trustee.

The next two sub-hypotheses examined the effects of benevolence on trust reliance and on trust disclosure. Hypothesis 1b anticipated actor and partner effects for benevolence on trust reliance. Hypothesis 1c anticipated actor and partner effects for benevolence on trust disclosure. Hypothesis 1b was partially supported by the results, as actor effects were found for benevolence on trust reliance, but not partner effects. Hypothesis 1c was fully supported, as both actor and partner effects were found for benevolence on trust disclosure.

Considering first the actor effects of benevolence, the findings show that benevolence perceptions of a trustee by a trustor have a significant influence on trustor reliance intentions and an even stronger influence on trustor disclosure intentions towards a trustee. Trust theory suggests that benevolence perceptions influence trust (Mayer et al., 1995) and previous empirical research has shown similar effects of benevolence perceptions

on both trust reliance and trust disclosure (Tomlinson et al., 2020; van der Werff & Buckley, 2017).

Considering next the reciprocal partner effects of benevolence, the findings show that benevolence perceptions have reciprocal partner effects on trust disclosure but not on trust reliance. Trust theory can explain this finding, as benevolence is deemed to be essentially affective and relational in nature (Colquitt et al., 2011), thus it would be expected to have reciprocal effects. However, the findings show that this reciprocity is evident in trust disclosure only and not trust reliance. This suggests that the benevolence of a trustee not only evokes trust disclosure from a trustor, but it also evokes a reciprocation of disclosure from the trustee.

In contrast, while the benevolence of a trustee evokes trust reliance from a trustor, it does not evoke a reciprocation of reliance from the trustee. These findings are at odds with previous empirical research that found reciprocal partner effects for benevolence on a single measure of trust that was close to reliance in concept (Yakovleva et al., 2010). They are, however, somewhat more in line with empirical research from Naber et al. (2018) who found that agreeableness (Costa & McCrae, 1992), a personality trait driving consideration and cooperation and which closely aligns with benevolence, influenced more affective forms of trust (McAllister, 1995). While the current study does confirm that benevolence is a strongly relational variable, it shows that benevolence influences a return of trust through trust disclosure rather than trust reliance. Benevolent individuals generate reciprocal trust exchanges by being both receivers and sharers of sensitive information. In contrast, while benevolent individuals are relied upon in terms of their expertise and judgement, their benevolence does not influence them to rely on those who rely upon them.

The final two sub-hypotheses examined the effects of integrity on trust reliance and on trust disclosure. Hypothesis 1d expected actor and partner effects for integrity on trust reliance. Hypothesis 1e expected actor and partner effects for integrity on trust disclosure.

Hypothesis 1d was partially supported, as significant actor effects but not partner effects were found for integrity on trust reliance. As neither actor nor partner effects were found for the influence of integrity on trust disclosure, hypothesis 1e was not supported.

Considering first the actor effects of integrity, the findings show that integrity perceptions of a trustee by a trustor have a significant influence on trustor reliance intentions but no influence on trustor disclosure intentions towards a trustee. The link between integrity and trust reliance provides support for trust theory that suggests integrity perceptions are largely cognitive in nature (Mayer et al., 1995; Colquitt et al., 2011), and that trust reliance is also cognitive in nature (Gillespie, 2003). It also supports the empirical work of van der Werff and Buckley (2017) who similarly found no links between integrity perceptions and trust disclosure, which is considered to be largely an affective construct (Gillespie, 2003).

Looking next at reciprocal partner effects of integrity, the findings show that integrity perceptions do not have reciprocal partner effects on either trust reliance or trust disclosure. This suggests that while the integrity of a trustee evokes trust reliance from a trustor, it does not evoke a reciprocation of reliance from the trustee. This is at odds with the theoretical proposals of Whitener et al. (1998) which suggests that integrity may have the strongest reciprocal influence of all three trustworthiness variables by influencing expectations of reciprocity and initiation of trust by a trustworthy person. This finding also contrasts with the empirical work of Yakovleva et al. (2010) who found reciprocal partner effects for integrity on trust. The findings of the current study suggest that integrity perceptions are less relational in nature, and while they have a direct influence on the trust reliance of the trustor towards the trustee, they do not influence a return of trust reliance from the trustee, nor do they have any significant influence (actor or partner) on trust disclosure.

As no partner effects were found for trust reliance from either ability, benevolence, or integrity, the results suggest that the influence of trustworthiness on trust reliance is not a strong indicator of reciprocity in relationships. In contrast, the influence of benevolence on

trust disclosure is more bidirectional and reciprocal in character. In other words, trust reliance is influenced only by the trustworthiness aspects of the trustee, whereas trust disclosure is influenced by both the trustworthiness attributes of the trustee and by the benevolence attributes of the trustor.

In summary, the results of hypothesis 1 highlighted that the strongest reciprocal elements in the relationship between trustworthiness and trust are the benevolence perceptions of both parties, which influence disclosure forms of trust.

7.2.2 Reciprocal Trust and Interpersonal Citizenship Behaviour

Hypothesis 2 examined the individual and reciprocal effects of trust on interpersonal citizenship behaviour (ICB). Similar to hypothesis 1, the terms actor and partner (Kelley & Thibaut; 1978; Kenny et al., 2006) are used instead of trustor and trustee, as each dyad member holds both roles simultaneously. In addition, an application of interdependence theory shows that this hypothesis is examining a basis of dependence within the relationship situation (structure) and also the interest that both members show for each other (psychological process of transformation).

Hypothesis 2 proposed that an actor's trust intentions (reliance, disclosure) towards a partner influence both actor and partner perceptions of interpersonal citizenship behaviour received (task-focused ICB and person-focused ICB). Four sub-hypotheses were specified in order to distinguish the influence of each sub-factor of trust on each sub-factor of ICB. The significant effect pathways found are illustrated in Figure 7.2 and discussed in detail in the following paragraphs.

Figure 7.2

Dyadic Patterns of Influence (Trust and ICB)

.
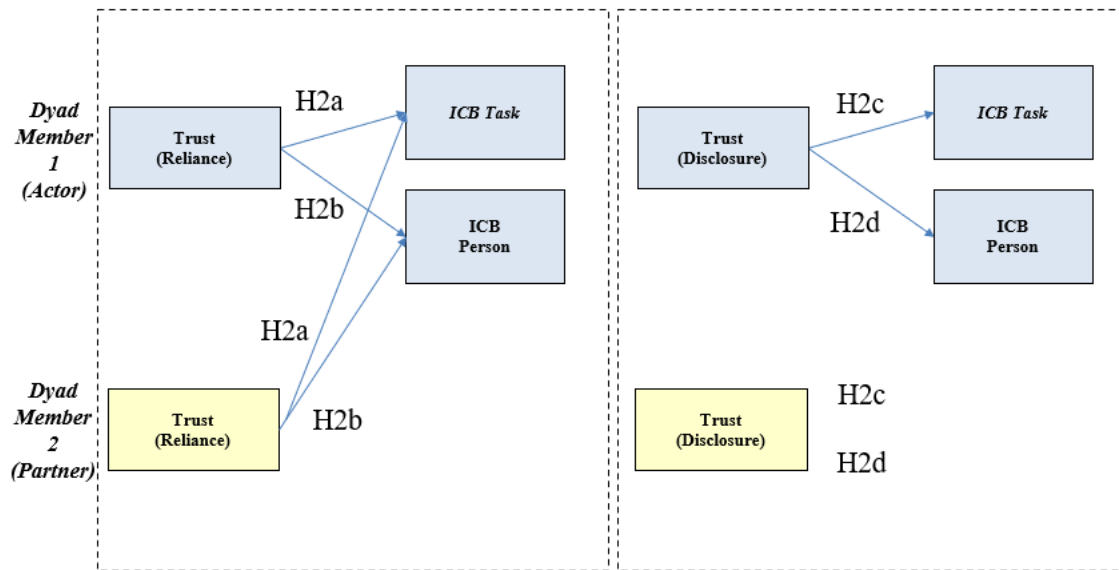
The first two sub-hypotheses examined the effects of trust reliance on ICB. Both actor and partner effects were expected for trust reliance on task-focused ICB (hypothesis 2a) and on person-focused ICB (hypothesis 2b). Both hypotheses were fully supported. The actor effects show that reliance intentions of the trustor influence the receipt of helping behaviours from the trustee. Reliance intentions have a significant influence on person-focused ICB and an even stronger influence on task-focused ICB. The partner effects show that reliance intentions of the trustor also influence the return of helping behaviours from the trustor to the trustee, both task-focused ICB and person-focused ICB.

Previous theoretical explanations of trust and cooperation in exchange relationships support this pattern of influence. The norm of reciprocity proposed by Gouldner (1960) is presented as a universal component of stable social systems, whereby the receipt of benefits creates a form of moral obligation to respond with benefits of equivalent value. Social exchange theory (Blau, 1964) describes the role of trust in social interactions, where the voluntary and unspecified nature of many social exchanges involves the risk of non-

reciprocation, thus requiring trust as a way of accepting that risk. In enduring relationships, the trust of one party creates a moral obligation for the other to fulfil those trust expectations, and that willingness to be vulnerable creates a relational bond and motivation to reciprocate with equivalent exchanges. Trust theorists have long proposed that trust results in cooperation behaviours (e.g., Dirks & Ferrin, 2001), and have explicitly proposed that the cooperation of one party is influenced by the trust of both parties (Ferrin et al., 2007).

Empirical trust research has tended to explore the link between trust and the general helping behaviours of the trustor (e.g., Halbesleben & Wheeler, 2015; Yang & Mossholder, 2010; Zhu & Akhtar, 2014). A smaller number of studies examine the relationship between trust and the helping behaviours of the trustee (e.g., Dirks & Skarlicki, 2009). The reciprocal trust study of leaders and subordinates by Brower et al. (2009) examined the helping behaviour of just one party (the subordinate). The current dyadic study looks at the effect of trust on both help received (actor effect) and on help given (partner effect) simultaneously, and confirms that trust reliance is an indicator of both receiving and giving help within a dyadic relationship. In contrast, the results of the dyadic study from Yakovleva et al. (2010) did not find evidence of partner effects between trust and ICB. However, the findings of hypothesis 2a and hypothesis 2b of the current study are consistent with the bulk of trust theory and empirical research, supporting the widely held view that trust and cooperation are fundamentally reciprocal processes.

Turning to trust disclosure, both actor and partner effects were expected for its influence on task-focused ICB (hypothesis 2c) and on person-focused ICB (hypothesis 2d). As the results found significant actor effects but no partner effects from trust disclosure, both hypotheses were partially supported. The actor effects show that disclosure intentions of the trustor influence the receipt of helping behaviours from the trustee. Disclosure intentions have a significant influence on both task-focused ICB and on person-focused ICB, but the influence on person-focused ICB is stronger. However, the lack of partner effects shows that

disclosure intentions of the trustor, whilst evoking the receipt of helping behaviours from the trustee, do not influence the return of helping behaviours from the trustor to the trustee. In other words, if I disclose sensitive information to you, you will help me, but this disclosure from me won't necessarily influence me to return help to you.

Previous trust theory has not frequently explored the disclosure element of trust, and the concept of trust employed in empirical studies is largely a form of reliance-based trust (e.g., Mayer & Davis, 1999) or cognitive trust (McEvily & Tortoriello, 2011). However, the results of the trust disclosure hypotheses in the current study suggest that disclosure does not evoke reciprocity like reliance does. While self-disclosure at work has the positive effect of creating closeness and triggering concern and help from others, experimental research has shown that it may also signal weakness which can inadvertently undermine the influence of the discloser (Gibson et al., 2018). This loss of influence may limit the ability of the discloser (trustor) to maintain a reciprocal relationship and may reduce their opportunities to return helping behaviours to the trustee. Self-disclosure may also reach a threshold where too much personal information is revealed and the relationship could become "too close for comfort" (Ehrhardt & Ragins, 2019). Furthermore, the organisational context might reduce the reciprocation of help if the receipt of help is attributed to normal job responsibilities with less moral obligation to return the favour (Belmi & Pfeffer, 2015).

In summary, the results of hypothesis 2 provided evidence that strongest reciprocal elements in the relationship between trust and interpersonal citizen behaviours are reliance forms of trust of both parties which influence both the receipt and the giving of help.

7.2.3   Dyadic Trust Change over Time

Hypothesis 3a proposed that changes in trust (reliance and disclosure) would be influenced by initial starting levels, such that trust at lower initial levels would increase more

over time. Analysis of the overall sample showed that trust reliance levels remained relatively stable over time. However, initial levels of trust reliance varied significantly within the sample, that is, some dyads started at significantly lower levels than others. Dyads which started with lower levels of trust reliance did increase more over time, as expected. In contrast, analysis of the overall sample showed significant changes in trust disclosure levels over time. Even though initial levels of trust disclosure varied within the sample, that is, some dyads started at significantly lower levels than others, the rate of change did not vary significantly. All dyads increased their levels of trust disclosure at the same rate, regardless of the starting level. These results provide partial support for hypothesis 3a. Hypothesis 3b proposed that trust (reliance and disclosure) would start at lower levels and increase more over time in newer relationships. The results did not support hypothesis 3b. Hypothesis 3c proposed that more frequent communication within the dyad would be associated with higher levels of trust and higher increases in trust. The results did not support hypothesis 3c.

The findings in relation to the stability of trust reliance are in line with established trust theory which suggests that trust reaches stable levels in mature relationships (Lewicki & Bunker, 1996; Rousseau et al., 1998). In addition, this is also in line with interdependence theory (Kelley & Thibaut, 1978) which suggests that stable patterns of interaction are reached in relationships over time through a process of adaptation. The context of the current study is established and successful small and medium-sized firms, expanding into international markets, with reasonably long-standing top management team members. Thus, the findings that trust reliance intentions were at stable levels are perhaps not surprising. Over 80% of dyads in the current sample report communicating daily, indicating a high level of interdependence between the parties. Stable levels of trust reliance in the overall sample would be a reasonable expectation for this context. Average levels of trust reliance were comparatively high in this sample to begin with, thus a sample of this nature may provide less scope for significant increases in reliance levels. Despite the stability of trust reliance

overall, the finding that those dyads who started with lower levels of trust reliance did increase over time provides evidence that dyads with lower levels of trust reliance had more scope to change.

The findings in relation to increases in trust disclosure levels provide an interesting insight into trust development. They show that even in established relationships characterised by high levels of interdependence and stable trust reliance, there is scope to increase trust. Starting levels of trust disclosure in the current sample were lower than trust reliance which is a similar pattern to trust levels commonly reported in empirical trust studies. However, the finding that all dyads demonstrated a similar rate of increase in trust disclosure, regardless of starting levels, suggests that the development of trust disclosure is a slower process than trust reliance and continues to occur over a longer period of time in established relationships. This finding supports theory that suggests more personal forms of trust take longer to develop and do not occur for all relationships (Lewicki & Bunker, 1996; Shapiro, 1992). The findings also support the theory that affect-based trust develops later than cognition-based trust (McAllister, 1995), as disclosure forms of trust are thought to be more affective in nature than reliance forms of trust (Gillespie, 2003). Empirical research has also shown that the influence of trust disclosure on knowledge sharing is stronger when relationships are more established (Alexopoulos & Buckley, 2013).

The finding that the length of a relationship did not have an influence on rates of trust change may be reflection of the sample characteristics and the context of the research. Theories on initial trust development suggest intensive and rapid change at the start of a relationship, followed by relative stability (Lewicki et al., 2006). However, the exact quantification of the length of this initial phase of rapid change is not specified by trust theory. Similarly, the timing of trust stability is not explicitly specified by trust theorists (Korsgaard et al., 2018). Evidence on the length of the initial period characterised by significant rates of change generally comes from empirical studies of trust in organisational

newcomer contexts. For example, a three-month study of newcomers (van der Werff & Buckley, 2017) showed faster growth of trust in the first month followed by periods of stability and more modest growth in months two and three. A ten-week study of new army cadets (Dirks et al., 2021) found a mix of stable, increasing, and decreasing trust. In addition, meta-analysis (Vanneste et al., 2014) has found just a small positive correlation between relationship duration and trust levels, but found significant variance across contexts. As the sample of the current study primarily consists of established relationships of longer than one year in duration, the results may be an indication that the influence of relationship duration dissipates during the first 12 months of a work relationship.

The finding that communication frequency did not have an influence on rates of trust change may also be reflection of the sample characteristics and the context of the research. As over 80 per cent of participants reported daily interactions, the sample may not have contained enough variability to test the hypothesis. In addition, it may be that the quality of communications is a stronger indicator of trust than the frequency of interactions (Whitener et al., 1998; van Zoonen et al., 2023).

In summary, the results of hypothesis 3 illustrate that different forms of trust can demonstrate different stability and change patterns in established relationships, with reliance forms of trust showing relatively stable levels, and disclosure forms of trust showing more dynamic characteristics.

7.2.4 Trust Incongruence

Hypothesis 4 proposed that the level and incongruence of dyadic trust intentions interact such that the positive relationship of trust (reliance and disclosure) with interpersonal citizenship behaviours (task-focused ICB and person-focused ICB) is stronger

at lower levels of trust incongruence than at higher levels of trust incongruence. The results found significant main effects of dyadic trust reliance and dyadic trust disclosure on both dyadic task-focused ICB and dyadic person-focused ICB. Analysis of the sample found modest levels of trust incongruence within the dyads. Moderating effects of trust incongruence were found only for trust reliance and person-focused ICB (hypothesis 4b). No other moderating effects of trust incongruence were found, including trust reliance incongruence and task-focused ICB (hypothesis 4a), and trust disclosure incongruence and task-focused ICB (hypothesis 4c) and person-focused ICB (hypothesis 4d).

The moderating effects of trust reliance incongruence on person-focused ICB suggest that the positive effects of dyadic trust reliance on person-focused helping are weaker at higher levels of reliance incongruence. Thus, when one party has greater reliance intentions in the relationship than the other party, the level of person-focused helping within the dyad is less than when the parties have more equal reliance intentions towards each other. In contrast, when one party has greater reliance intentions in the relationship than the other party, the level of task-focused helping within the dyad is not significantly different to when the parties have equal levels of reliance. Similarly, when one party has greater trust disclosure intentions in the relationship than the other party, the level of both task-focused helping and person-focused helping within the dyad is not significantly different to when the parties have equal levels of disclosure (assuming similar levels of overall dyadic trust disclosure).

The main dyadic-level effects of trust reliance and trust disclosure on both task-focused and person-focused ICB supports the well-established trust theory which proposes that a reciprocal trusting relationship leads to an exchange of interpersonal help behaviours from both parties (Blau et al., 1964; Ferrin et al., 2007). In contrast with much of the early trust theory which suggests that trust becomes equally balanced in established relationships (e.g., Deutsch, 1958; Zand, 1972), the findings of this study demonstrate that mature trust

can show modest levels of incongruence. This supports more recent trust theory that proposes parties can differ in the trust levels towards reach other (e.g., Brower et al., 2000; Korsgaard & Bliese, 2021; Schoorman at al., 2007).

These findings suggest that the impact of trust incongruence on interpersonal helping behaviours is only of concern when reliance forms of trust are unbalanced, and then only on person-focused helping behaviours. In a situation of reliance imbalance, both parties seem to help each other on tasks to the same extent as if there was no imbalance, assuming similar levels of overall trust. However, reliance imbalance seems to reduce person-focused helping in comparison to when there are balanced levels of reliance within the relationship. This provides an extra nuance to the research of de Jong et al. (2007) who found that individual levels of help received (in a combined measure of task- and person-focused helping) were highest when both parties were highly task interdependent. The findings of this study suggest that in a work-context, task-focused helping is less discretionary and less impacted by different levels of dependence within a dyad. In contrast, person-focused helping may be more discretionary and more susceptible to influence from different levels of dependence within a dyad. Where one party is more dependent than another, the amount of reciprocal person-focused helping may reduce. In contrast, the findings show that imbalance in disclosure does not seem to significantly impact the levels of either task-focused or person-focused helping. Taken in conjunction with the earlier findings of hypothesis 2 that disclosure does not significantly influence two-way helping, it may be that imbalance in disclosure has less scope for impact at the dyadic level of analysis.

In summary, the results of hypothesis 4 illustrate that trust is not necessarily balanced between the two parties in mature relationships but find that this is only of concern for reliance forms of trust where it negatively impacts person-focused helping.

7.3   Research Contributions

Interpersonal trust is a relational construct involving two people. The fundamental premise of this study is that in order to fully understand the phenomenon, both sides of the relationship must be examined (Ferrin et al., 2007; Korsgaard et al., 2015). This implies that the perspectives of both the trustor and the trustee must be considered. It also implies that each party is at once both a trustor and a trustee, intertwined in a reciprocal pattern of trusting the other and being trusted by the other. Accordingly, this study advances previous trust theory and empirical research by capturing the perceptions of both parties in a trust relationship and investigating the extent of reciprocity and change across different forms of trust. This approach brings unique insights into the nature of dyadic trust and the identification of factors that influence the reciprocity of trust within a relationship. The key areas of contribution are: (1) relational and reciprocal aspects of trust; (2) stability and change in forms of trust; (3) the impact of trust congruence and incongruence; and (4) trust and relationship theory. Each of these contributions is discussed in detail in the following sections.

7.3.1   Relational and Reciprocal Aspects of Trust

This study demonstrates the relational and reciprocal components of dyadic trust between two coworkers in established work relationships. It builds on the work of Yakovleva et al. (2010) which examined reciprocal features of trustworthiness, trust, and interpersonal citizenship behaviours. In an extension of that research, the current study employs the behavioural trust inventory (Gillespie, 2003) to measure two distinct aspects of trust intentions: reliance, which is more cognitive aspect of trust; and disclosure, which is a more affective aspect of trust. This study finds that benevolence perceptions play a unique role in the reciprocity of trust between two parties, specifically in relation to trust disclosure

intentions. This study also finds that trust reliance intentions exhibit reciprocal effects on the interpersonal citizenship behaviours of both parties in a trusting relationship.

It is already well established that benevolence perceptions of a trustee (by a trustor) influence trustor disclosure intentions towards a trustee (e.g., Tomlinson et al., 2020; van der Werff & Buckley, 2017). The current research additionally finds that the benevolence of a trustee also influences trustee disclosure intentions towards a trustor. In other words, individuals who display high levels of benevolence are not only highly trusted in terms of information disclosure, they themselves also show high levels of information disclosure in return.

The observed reciprocal effects for benevolence on trust disclosure may be explained by trust theory, which suggests that benevolence is the most relational component of trustworthiness (Colquitt et al., 2011; Legood et al., 2023). In mature relationships, where both parties have got to know each other well, trust theory (Lewicki & Bunker, 1995; Rousseau et al., 1998) and empirical research (Holtz et al., 2020; Jones & Shah, 2016) suggests that benevolence perceptions could be considered as a proxy for the actual benevolence of the partner. Benevolence itself is thought to motivate own trust as well as inspiring trust from others, as benevolent individuals tend to be optimistic about relationships and have high expectations of reciprocity (Deutsch, 1958; Rotter, 1967, 1971; Whitener et al., 1998). Additionally, benevolence perceptions can lead to a form of felt benevolence (Lester & Brower, 2003), which can lead to actual benevolence via a sense of interpersonal responsibility (Levine et al., 2018). Perceptions of benevolence can also lead to a shared sense of identity within the dyad and a norm of mutual benevolence attributions and mutual trust patterns (Korsgaard et al., 2015).

The study did not find any effects of ability perceptions on trust disclosure, as expected, given that ability is considered to be a more cognitive in nature (Schoorman et al., 2007) and therefore less related to the more affective construct of disclosure-based trust

(Gillespie, 2003). More interestingly, while the study did find, as expected, that integrity perceptions of a trustee (by a trustor) influence trustor disclosure intentions towards a trustee, reciprocal effects were not evident for integrity perceptions, as was expected. This finding suggests that individuals who display high levels of integrity are trusted in terms of information disclosure, but their integrity does not influence their own information disclosure in return. This is at odds with trust theory that suggests integrity may be the most reciprocal trustworthiness component (Whitener et al., 1998). However, it supports the findings of experimental research that finds benevolence to be more important than integrity to promote trust (Levine & Schweitzer, 2014; 2015).

In addition, while the study confirms that all three trustworthiness characteristics of the trustee (perceived by the trustor) influence the trust reliance intentions of the trustor, it finds that they demonstrate no evidence of reciprocal (partner) effects on the trust reliance intentions of the trustee. These findings support previous single-sided trust research which has shown than all three trustworthiness factors are important for trust reliance in peers (Knoll & Gill, 2011; van der Werff & Buckley, 2017). However, the findings of the current study suggest that while individuals who display high levels of the three components of trustworthiness are highly trusted in terms of reliance, their trustworthiness characteristics do not influence their own intentions to rely on others. These findings provide additional support for the less reciprocal nature of ability and integrity perceptions. However, they show that benevolence perceptions, while strongly reciprocal in terms of their effect on trust disclosure, do not have a similar reciprocal effect on trust reliance. This could be explained by the more affective nature of benevolence (Colquitt et al., 2011), which might therefore be less related to the more cognitive construct of reliance-based trust (Gillespie, 2003). Taken together, these findings offer a unique insight into the reciprocal effects of the trustworthiness of both parties on the trust of both parties in a dyadic relationship. The results

provide evidence that dyadic reciprocal effects in the relationship between trustworthiness and trust come about through the effect of benevolence perceptions on trust disclosure.

Turning to the effects of trust intentions on interpersonal citizenship behaviours, the results of this study demonstrate that both reliance and disclosure forms of trust from a trustor influence the receipt of helping behaviours from a trustee (actor effect). This research additionally finds that trustor reliance (but not disclosure) influences the return of helping behaviour from the trustor to the trustee (partner effect). In other words, individuals who signal their vulnerability in terms of reliance on another not only receive help as a result, but they also give help in return. A related interpretation of the results is that the helping behaviour of one party is influenced by the trust reliance intentions of both parties towards each other. This suggests that reciprocity in helping is influenced by expressions of vulnerability which create relational bonds and motivation to reciprocate. This can be explained by the norm of reciprocity (Gouldner, 1960) and social exchange theory (Blau, 1964). These findings also provide evidence to support trust theory (Ferrin et al., 2007) that proposes the trust of both parties towards each other influences individual helping behaviour.

In contrast, trust disclosure intentions do not display reciprocal effects in the current study. In other words, individuals who are willing to be vulnerable through information disclosure receive help as a result, but this vulnerability does not influence them to give help in return. A similar interpretation is that the helping behaviour of one party is only influenced by the trust disclosure intentions of the other party, and not by the disclosure intentions of the helper. Thus, trust disclosure does not appear to exhibit reciprocal effects on helping behaviour in the same manner as trust reliance. Work relationship theory suggests that while self-disclosure is a primary mechanism for building trust in non-work relationships, it might play a fundamentally different role in work relationships and can have positive or negative influences, depending on the context (Gibson, 2018). The vulnerability inherent in trust disclosure might undermine the trustor in a work context in a way that the vulnerability of

trust reliance does not. Interdependence in the form of task reliance might be expected in the current sample of top management team members, but interdependence in the form of trust disclosure might be less accepted, particularly in relation to disclosure of sensitive personal information. Reliance-based trust has been interpreted as a form of professional trust, whereas disclosure-based trust has been interpreted as a form of personal trust (Alexopolous & Buckley, 2013). In a work context, disclosure could undermine the status of the trustor and create a more dependent form of trust where the trustor receives help but is not expected or able to give help in return. The distinction found in the current study between the reciprocal effects of trust reliance and trust disclosure on helping behaviours offers a valuable perspective on dyadic patterns of trust and provides a more nuanced understanding of trust dependence and trust interdependence within work relationships.

7.3.2   Stability and Change in Forms of Trust

This study is the first if its kind to demonstrate dyadic patterns of trust development in established interpersonal work relationships. While the dynamic nature of trust is inherent in general trust theory (e.g., Lewicki et al., 2006; Rousseau et al., 1998), further theoretical elaborations have mainly focused on initial trust development in the early stages of relationships (e.g., McKnight et al., 1998; Meyerson et al., 1996). Very little theoretical debate has occurred in relation to trust in mature relationships, where the stability and change patterns of trust are less understood (Korsgaard et al., 2018). Much of the earlier empirical trust research focused on cross-sectional designs (static 'snapshots') or time-lagged designs (capturing different variables at each timepoint) which did not provide insight into the temporal dynamics of trust (Lewicki et al., 2006). In addition, empirical trust research measuring a trust variable at just two timepoints (e.g., Mayer et al., 2011; Shamir & Lapidot, 2003), while offering valuable insights into the effect of interventions and relationships

between variables, is not considered fully longitudinal as it cannot provide sufficient insight into the overall the overall trajectory of change over time (Ployhart & Vandenberg, 2010).

Empirical longitudinal trust research (measuring a trust variable at three timepoints or more) has grown in the last decade but largely focuses on single-sided perspectives of trust. In addition, these studies tend to employ experimental designs or use student samples. The few single-sided field studies of trust development over time tend to focus on new relationships (e.g., Dirks et al., 2021; van der Werff & Buckley, 2017). The small number of studies that examine both the longitudinal and dyadic perspectives of interpersonal trust also tend to use experimental designs (e.g., Alarcon et al., 2018; Ferrin et al., 2008) or explore new relationships using student samples (e.g., Jones & Shah, 2016; Methot & Cole, 2021). This study offers an understudied perspective on trust over time within mature relationships in an actual organisational field context, while also capturing both sides of the trust relationship.

This study highlights that in mature relationships, different forms of trust can display different patterns of stability and change over time. Specifically, the current sample displays stability in overall levels of trust reliance over time, but also shows that dyads differ in their trust reliance trajectories, with some dyads (at lower initial levels of trust reliance) displaying growth patterns. Thus, higher levels of trust appeared to be more stable than lower levels of trust. In contrast, the current sample displays the more dynamic quality of trust disclosure over time, as there was significant variability in disclosure levels within the sample, and a significant number of dyads showed growth, irrespective of their starting point.

These findings contribute detailed empirical evidence regarding trust stability and change in mature relationships. Trust theory recognises that trust in established relationships can stabilise at different stages in a non-linear fashion (Lewicki et al., 1996) or can fluctuate depending on relationship experiences (Rousseau at al., 1998). However, it is not yet clear when and why trust reaches stable levels, nor why some relationships become stable at a

lower level than others (Korsgaard et al., 2018). The distinction between reliance and disclosure forms of trust in the current study, and evidence of their different trajectories over time, offers a unique insight to the understanding of trust development and maintenance. The findings provide evidence of the potential for both stability and change in trust on an ongoing basis.

Finally, this study contributes to the debate regarding the influence of relationship duration and communication frequency on trust development. Trust theory suggests that trust increases over time as relationships become established (Lewicki & Bunker, 1996), thus trust growth should be positively related to both the duration of a relationship (as a proxy for relationship maturity) and to how often the parties interact (as a proxy for knowledge of one another). However, the current study does not find any link between trust growth and either relationship length or communication frequency. Empirical evidence on the link between relationship duration and trust is mixed and may depend on contextual factors (Dirks & Ferrin, 2002; Vanneste et al., 2014). Empirical evidence on the influence of communication frequency on trust is also mixed, finding both positive effects on trust (e.g., Becerra & Gupta, 2003; McAllister, 1995; Miller et al., 2019; Nienaber et al., 2022) and no effects on trust (Webber, 2008; van Zoonen et al., 2023).

The context of the current study may explain the lack of influence of relationship length or communication frequency. Although top management teams in general can vary widely in terms of interdependence between members (Hambrick et al., 2015), the vast majority of dyads in the current study reported daily interactions. It may well be that the sample did not contain sufficient variability in communications frequency to test this hypothesis. It may also be that the quality of communication is a better predictor of trust (Fulmer & Gelfand, 2012) than the frequency of communication. While the sample contained plenty of variability in relationship duration, hardly any dyads were in relationships of less than one year duration. While empirical field research has demonstrated

patterns of trust development the first few months of work relationships (Dirks et al., 2021; van der Werff & Buckley, 2017), the findings of this study suggests that the length of a relationship is a less important factor regarding trust in established relationships of greater than one year in duration.

7.3.3 Does Trust Incongruence Matter?

This study contributes to the trust literature which examines the impact of unequal levels of trust within a relationship dyad. The current sample displays moderate levels of incongruence in both trust reliance and trust disclosure. This supports trust theory which proposes that trust is not necessarily balanced at equal levels between parties in stable, mature relationships (Brower et al., 2000; Korsgaard & Bliese, 2021; Schoorman at al., 2007; Tomlinson et al., 2009). The study also provides evidence that, at the dyadic-level, both trust reliance and trust disclosure significantly influence task-focused ICB and person-focused ICB, confirming the dyadic nature of trust and helping behaviours. This supports established trust theory which proposes that trust occurs within a relationship and involves cooperative and supportive behaviours from both parties (Blau et al., 1964; Ferrin et al., 2007).

Trust incongruence is generally thought to be detrimental to the beneficial outcomes of trust (Tomlinson et al., 2009), although theory is underspecified in this area (Korsgaard et al., 2015; Korsgaard & Bliese, 2021). Empirical team trust research has found negative effects of team trust incongruence on team performance (e.g., Carter & Mossholder, 2015; de Jong & Dirks 2012; de Jong et al., 2021). Interorganisational research is also beginning to examine similar negative effects (Graebner et al., 2020). Empirical research on interpersonal trust incongruence is limited, although a small number of studies have found similar negative effects of incongruence (e.g., Brower et al., 2009; Methot & Cole, 2021).

In an examination of the effects of trust incongruence on the positive relationship between dyadic-level trust and dyadic-level helping, the study found just one area of impact. The positive influence of dyadic trust reliance on person-focused ICB was weaker at higher levels of trust reliance incongruence. This implies that more balanced forms of trust reliance lead to greater levels of person-focused helping within a dyad. However, the lack of balance in trust reliance does not impact task-focused helping which is influenced solely by the overall level of trust reliance within the dyad. Similarly, a lack of balance in trust disclosure does not seem to weaken task-focused or person-focused helping, which are both influenced solely by the overall levels of each form of trust at the dyadic level.

These findings contribute to the dialogue on trust incongruence and suggest that the impact of moderate levels of trust incongruence on reciprocal helping behaviours is small. Moderate levels of trust disclosure incongruence do not appear to significantly impact the levels of either task-focused or person-focused helping. Moderate levels of trust reliance incongruence do not appear to significantly impact the level of task-focused helping but do reduce the level of person-focused helping within the dyad. Thus, when one party is more dependent than the other in terms of reliance, the level of joint person-focused helping appears to reduce, but the level of joint task-focused helping appears to remain unchanged. A possible explanation for this might be the more discretionary and personal nature of person-focused helping which could be more prone to reduce in relationships of unequal dependence. Consequently, in a workplace context, optimum forms of dyadic reliance-based trust may need to be more congruent than optimum forms of disclosure-based trust.

7.3.4 Trust and Relationship Theory

This study combines social exchange theory (Blau, 1964) with interdependence theory (Kelley & Thibaut, 1978; Van Lange & Balliet, 2015) to bring a more dyadic and relational perspective to interpersonal trust. Social exchange theory has served as the

bedrock of trust theory for the last three decades (Colquitt et al., 2014; Cropanzano et al., 2017). The norm of reciprocity (Gouldner, 1960) is illustrated in the current study by the findings in relation to the reciprocity of trust and by the low levels of trust incongruence and ICB incongruence. These low levels of incongruence confirm that perfect equivalence in exchanges is rare and that some amount of imbalance in exchanges is common in practice. Exchange imbalance can also be considered positive as it can signal trusting expectations of reciprocity in the future, and a long-term relationship orientation where the balance of exchange passes from one partner to another over time (Blau, 1964). The findings of this study also illustrate the dynamic nature of social exchanges over time and the influence of trust in the process (Blau, 1964), and provide a distinction between reliance and disclosure forms of trust. However, social exchange theory has been criticised for lack of detail and an emphasis on independent transactions rather than interdependent relationships where the perspectives of all involved parties are taken into consideration (Cropanzano & Mitchell, 2005; Cropanzano et al., 2017).

In order to address the shortcomings of social exchange theory, this study additionally employs interdependence theory (Balliet & Van Lange, 2013; Kelley & Thibaut, 1978; Van Lange & Balliet, 2015) as a framework to illustrate how the trust of a partner influences the other partner within a dyadic work relationship. Trust theory explicitly proposes that interdependence must exist within a relationship in order for trust to occur (Rousseau et al., 1998; Sheppard & Sherman, 1998), but a systematic application of theory explaining the components of interdependence is uncommon in trust research. The findings of this study in relation to the four key principles of interdependence theory (structure, process, interaction, adaptation) are summarised in Table 7.1.

Firstly, considering the six sub-components of structure, the level of dependence (degree and mutuality) of each partner on the other is illustrated in terms of trust reliance and trust disclosure. The study shows that trust exhibits modest levels of incongruence in

the context of established work relationships with high levels of role interdependence. The study also shows that these levels of trust incongruence have little impact on interpersonal helping within a dyad.

The ways in which each partner influences the other (basis of dependence) are demonstrated by the dyadic-level examination of trustworthiness, trust, and interpersonal citizenship behaviours. The study shows the influence of ability and integrity perceptions on trust reliance, and the influence of benevolence perceptions on both trust reliance and trust disclosure. In particular, the study draws attention to the reciprocal characteristics of benevolence perceptions and trust disclosure. The study also shows the influence of both trust reliance and trust disclosure on ICB and draws attention to the reciprocal characteristics of trust reliance in this process.

The degree to which both partners have common interests and mutually beneficial outcomes (covariation of interests) is illustrated by the relatively high levels of trust in the sample and the association found between trust and ICB at the dyadic (aggregated) level of analysis. The changing nature of interaction over time (temporal structure) is illustrated by the findings in relation to trust reliance stability and trust disclosure change in the longitudinal analysis over five timepoints in a six-month period. The final structural dimension recognises the impact that the knowledge each party has of the other (information availability) influences relationship dynamics. Using relationship duration and communication frequency as proxies for familiarity within a relationship, this study found that neither influenced levels of trust or trust change over time.

The second principle of interdependence theory (process) refers to the psychological transformation a party undergoes when their motivation moves from self-interest and personal benefit to concern for the other party and joint relationship goals. This is illustrated in the current study by the findings in relation to the reciprocal elements of trust and by the rather low levels of trust incongruence in the sample. The third principle of interdependence

theory (interaction patterns) refers to the combination of individual-level and dyadic-level influences which make each relationship unique. This is illustrated by the variation in trust levels and trust change patterns found in the current sample of established work relationships. Finally, the fourth principle of interdependence theory (adaption) refers to the emergence of stable patterns in established relationships. This is illustrated by the stability of trust reliance exhibited in the current sample. However, the change exhibited in trust disclosure levels, which was not influenced by relationship length, illustrates that trust disclosure is more receptive to change in established relationships.

The application of an interdependence model to this study as illustrated above allows the hypotheses and findings to be presented in a systematic and integrated manner. Interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) has developed over time into an extensive theory of interpersonal relationships (Kelley et al., 1983, 2003) and integrates many other social psychology theories (Van Lange & Balliet, 2015). Interdependence theory is a very broad framework onto which more specific theories can be mapped in an integrated and systematic manner. Dyadic approaches to trust such as that of the current study can be a way of thinking about interdependence, and the application of interdependence theory is a way of taking the interpersonal context of trust fully into account (Johns, 2017; 2018). By utilising interdependence theory as a way of illustrating the inherently dyadic nature of trust, this study provides a more structured way to present several aspects of interpersonal trust. This allows for other interpersonal phenomena to be compared, contrasted, and integrated with trust in a systematic manner. In this way, the current study endeavours to "ride the crest" of current trust research (Dirks & de Jong, 2022) by continuing to extend beyond more basic models of trustor centric research, and to anticipate a future third wave of trust research focusing on the development of more comprehensive and integrative trust models.

Table 7.1

Study Findings related to Interdependence Theory

Theory Principles	Key Components	Hypothesis	Related Study Findings
1. Structure	1. Degree of dependence 2. Mutuality of dependence	H4	• Modest levels of trust incongruence • Little impact of trust incongruence on ICB
	3. Basis of dependence	H1 H2	• Influence of trustworthiness perceptions (ability, benevolence, integrity) on trust (reliance, disclosure) • Influence of trust (reliance, disclosure) on ICB • Relational and reciprocal forms of trust (benevolence influences on disclosure, reliance influences on ICB)
	4. Covariation of interests	H4	• Influence of dyadic trust on dyadic helping
	5. Temporal structure	H3	• Stability of trust reliance • Change in trust disclosure
	6. Information availability	H3	• No impact of communication frequency on trust change • No impact of relationship length on trust change
2. Processes	Psychological transformation from immediate self-interest to concern for another and long-term relationship goals	H1 H2 H4	• Reciprocity of trust (as 1.3 above) • Modest levels of trust incongruence
3. Interaction	Interpersonal interaction patterns (individual and dyadic)	H3	• Context of established relationships • Variation in trust levels and change patterns
4. Adaptation	Stable patterns in established relationships	H3	• Stability of trust reliance • Change in trust disclosure • No impact of relationship length on trust change

7.4   Implications for Practice

This research study has practical implications for both individuals and organisations. The results demonstrate the importance of developing two-way interpersonal relationships based not merely on demonstrating trustworthiness to others and earning their trust, but also on trusting others by being willing to rely upon them and openly share sensitive information with them. As the study has shown that interpersonal citizenship behaviours are influenced by the level of trust two people have in each other, individuals and organisations should prioritise an awareness of interpersonal trust and the development and maintenance of two-way work relationships based on a foundation of trust.

From an individual's perspective, focusing on reciprocal trust within their relationships will maximise the benefits of reciprocal helping. This requires understanding the need to simultaneously trust others while at the same time demonstrating trustworthiness in order to be trusted in return. To demonstrate trustworthiness, individuals should be aware of the need to engage in behaviours that signal the three factors of trustworthiness: ability, benevolence, and integrity. Special attention should be paid to signalling benevolence as it plays a key role in encouraging closer relationships based on disclosure-based trust from both parties. In addition, individuals should understand that accepting the reliance of another person not only creates a duty to help them, but also has the benefit of encouraging them to offer help in return.

At an organisational level, trust and helping behaviours are influenced by human resource policies and practices that create the relational climate for task and interpersonal exchanges (Mossholder et al., 2011). Firms should be aware of employee perceptions of their human resource systems which have consequences for cooperation and knowledge sharing in their workplace. As employees interact within the context of specific human resource systems, collective interpretations create behavioural norms that guide employee

interpersonal exchanges. For example, performance appraisal and rewards systems that do not adequately recognise interpersonal skills or helping others to achieve their goals can undermine collaborative helping behaviours (Griffin et al., 2007; Park & Sturman, 2022). Favourable human resource policies should be put in place to motivate individuals to foster more effective workplace relationships based on reciprocity and trust.

Finally, the results of this study show that individuals and organisations can benefit from understanding that trust can evolve over time, even in relationships of long standing. This implies that individuals should proactively attend to the quality of their relationships on an ongoing basis. Organisations can facilitate this by formal monitoring and evaluation of exchange relationships. For example, 360-degree feedback assessments can be used to identify strengths and developmental needs necessary to develop high-quality exchange relationships. Organisations should also be cognisant of fact that an array of team development interventions can be utilised to promote trust (Shuffler et al., 2018), albeit that establishing a definitive association between training and outcomes is challenging due to common design limitations in practice (Martin et al., 2021). The interpersonal relationship management components of team building and leadership development interventions which focus on developing collaborative behaviours and conflict resolution skills can contribute to maintaining and increasing trust on an ongoing basis.

7.5   Limitations

The contributions of this study need to be considered in the light of certain limitations to the research study design. Firstly, even though the data were collected from two sources (dyad partners) and at multiple points in time, data collection relied on self-reports which could be influenced by common method variance. As the bulk of the constructs being studied are psychological states, limited options exist to capture them other that self-reports (Chan, 2009). However, several features of the study reduce concerns about common method

variance. Procedural remedies covering survey administration and survey design (Brannick et al., 2010; Podsakoff et al., 2003; 2012) were implemented to control the occurrence of common method variance. Furthermore, non-significant correlations found both within and between time points indicated that measurement error does not occur between the constructs (Spector, 2006). The application of Harman's single-factor test provided further indication that no one general factor accounted for the majority of the variance, as did the results of a model test with a single method factor. Thus, as a result of the preventative features built into the study design and the results of statistical tests, common method variance is not of significant issue in the current data set.

Second, while an advantage of this research is the distinction between reliance-based trust and disclosure-based trust, the measure of disclosure-based trust (Gillespie, 2003) does not distinguish between disclosure of sensitive work information and sensitive personal information. Disclosure of sensitive work information has generally been studied in the context of knowledge sharing which is considered to be a positive outcome of trust (e.g., Alexopoulos & Buckley, 2013). The positive impact of work information disclosure on trust has also been studied in the context of transparency perceptions, although the complexity of the construct has been highlighted (Tomlinson & Schnackenberg, 2022). However, the vast majority of empirical research on the disclosure of sensitive personal information has taken place in the close relationship literature where is it considered to be positive for relationship quality, but the impact of this form of self-disclosure in the work domain is under-researched. Experimental research by Gibson et al. (2018) found that sharing personal weaknesses at work with lower status coworkers negatively influenced task and relationship outcomes but did not have negative influences when shared with peer status coworkers. Personal disclosures signal vulnerability which trustors do not expect to see in higher status coworkers (as opposed to peers), thus it results in greater conflict and lower trustor perceptions of respect, influence, liking, and less desire to continue the relationship with the

trustee. A series of laboratory experiments by Levine and Wald (2019) found that feigning happiness in the case of personal distress increased trust in professional settings but not in personal settings. At work, hiding negative personal feelings can signal competence, self-regulation, resilience, and commitment, despite being somewhat dishonest, whereas in personal settings, feigning happiness negatively affects intimacy and connection. A fruitful avenue for future research could be to investigate the distinction between disclosure of work-related sensitive information and personal sensitive information in the context of a variety of work relationships.

Third, while the sample is varied in terms of industry, it is limited to firms based in Ireland. Trust theorists have proposed that cultural norms and values influence the process of trust development (e.g., Doney et al., 1998). Some empirical studies have found variations in the process of trust across national cultures, in particular contrasting individualist versus collectivist societies. For example, Huff and Kelley (2003) found that trust propensity was higher in individualist cultures than collectivist cultures. Branzei et al. (2007) found that trustors from individualist cultures were influenced more by individual characteristics of the trustee and ability and integrity judgements, whereas trustors from collectivist cultures were influenced more by situational signals and benevolence and predictability judgements. Chua et al. (2009) found that the influence of friendship on affect-based trust was more positive in individualist cultures than in collectivist cultures, whereas the influence of economic dependence on affect-based trust was more negative in individualist cultures than collectivist cultures. However, empirical evidence on cultural differences in trust is mixed. A review by Ferrin and Gillespie (2010) concluded that the general principle of trust applies across cultures and the trustworthiness characteristics of ability, benevolence, and integrity appear to be universal, but some functional aspects of trust are culturally specific. Furthermore, a study workplace teams (de Jong et al., 2021) found that team trust consensus is positively related to team performance but is negatively related to national culture diversity withing the

team. Further research is needed to establish if the findings of the current study generalise to other countries and cultures.

Fourth, the sample is predominantly male. While no evidence of gender differences was found in the current study, other research has found evidence of gender differences in relation to trust. A recent meta-analysis of experimental game research (van den Akker et al., 2020) found that men are more trusting than women in the trust game (Berg et al., 1995). This is potentially explained by evolutionary theory and a stronger psychological tendency in men to take risks in order to acquire resources. In experimental game settings, women are found to be more risk-averse, more aware of social cues, and less competitive than men (Croson & Gneezy, 2009). However, trust game research has found that women maintain trust more than men following a trust violation, because they prioritise retaining social connections and relationships (Haselhuhn et al., 2015). While some individual trust game studies have found women to be more trustworthy than men (e.g., Buchan et al., 2008), the meta-analysis did not support this finding. Most empirical studies on trust in organisational settings do not report any gender differences. An exception is a recent study by Qiu et al. (2022) who found that the influence of benevolence perceptions and disclosure-based trust is stronger for female trustors than for male trustors. This could imply that the results of the current study regarding benevolence and disclosure are underestimated due to the lower numbers of women in the sample. Future research with a more balanced gender sample could also explore gender differences in relation to the ability and integrity dimensions of trustworthiness perceptions, and in relation to reliance-based trust.

Additionally, gender stereotypes in relation to trustworthiness could be examined. In general, men are expected to be competent and agentic, whereas women are expected to be warm and cooperative, although this may be changing in recent times as women become more agentic (Eagly et al., 2020). A recent experimental and field study by McClean et al. (2022) found that when women engage in agentic voice, perceptions of their competence are

stronger than those of men, as it is less expected of them, and therefore more noticeable. In a similar vein, this study found that when men engage in communal voice, perceptions of their benevolence are stronger than those of women, as this is considered atypical behaviour of men.

In a dyadic context, a gender aspect of interest is the gender composition of the dyad. For example, in a meta-analysis of experimental social dilemma research, Balliet et al. (2011) found that while gender itself has no influence on cooperation, the composition of the gender pair does have an influence, as men are more cooperative than women when paired in same-sex dyads, whereas women are more cooperative than men when paired in mixed-sex dyads. Trust may have different consequences depending on the gender composition of the dyad. In an experimental dyadic negotiation study, Olekalns et al. (2014) found that trust affected deceptive behaviour in all-female and mixed-sex dyads, but not in all-male dyads. A sample with more female participants could explore the aspects of same-sex and mixed sex dyads in an organisational field setting.

7.6   Future Research Directions

In addition to addressing the limitations that have been highlighted, several promising avenues exist for future research in the area of dyadic trust. One important aspect is the influence of organisational roles, relative status, and power on trust within dyadic organisational relationships (Fulmer & Gelfand, 2012). Based on the characteristics of the sample, the current study adopted a coworker referent and an indistinguishable dyadic design, thus these influences were not directly hypothesised. While reporting relationship was controlled for in the analysis, it was not found to have any influence on the results. However, evidence found of the impact of trust reliance incongruence within the dyads could be interpreted as a form of power difference itself. Theory and research suggest power and

relative status influence trust, although propositions and findings are mixed. Inequality and power differences are inherent in the foundational models of trust (e.g., Blau, 1964). Those with lower power can trust less, as they feel open to exploitation from the party with higher power, whereas those with higher power can trust more in order to gain the benefits of trust. In contrast, the motivated attribution theory of trust (Weber at al., 2004) suggests that individuals with lower power in a relationship can have more positive expectations and can trust more as a way of managing the anxiety of dependence, whereas individuals with higher power (and lower dependence) may be less motivated to take risks.

Experimental research has also demonstrated conflicting evidence regarding the influence of power and status on trust. For example, Lount and Pettit (2012) demonstrated that individuals who perceive themselves as higher status than their partner have higher benevolence perceptions and thus higher trust. In contrast, Schilke et al. (2015) found that individuals with greater power (in terms of structural independence) demonstrate lower trust than those with less power, whereas individuals who are low in power have higher benevolence perceptions, higher levels of hope, and higher levels of trust. Experimental findings replicated in a field study demonstrated that instability of a power position causes concern about losing power and thus decreases trust (Mooijman et al., 2019). Similarly, in a series of experimental and organisational field settings, Feenstra et al. (2020) found that leader power instability leads to distrust and reduced willingness to share power, especially when the subordinate is relatively senior (compared to junior). Experimental research by Evans and Schilke (2023) demonstrated that when supervisor power is framed as ability to reward rather than to punish, it influenced subordinate exploration behaviour through the mechanism of perceived benevolence. A recent study (Du Plessis et al., 2023) found that both high- and low-relative-power individuals show lower trust than individuals in equal-power relationships, as they have greater conflict of interest. In terms of trust reciprocity, recent experimental research by Mooijman et al. (2023) found that people are more likely to

return trust to high-power individuals than to low-power individuals, because they think high-power individuals consider them to be more trustworthy. While inconclusive, the findings of empirical trust research suggest that power and status differences within a relationship are factors to be considered when examining levels of trust. This would require a distinguishable dyadic design where the unique influences of each partner are individually modelled (e.g., leader-follower dyadic research; Kim et al., 2020).

Furthermore, the role of emotion in trust is another promising avenue for future trust research, in particular on a dyadic level of analysis as has been highlighted in a recent review by Lee et al. (2023). The findings of the current study illustrate that trust reciprocity occurs through the more affective aspect of trustworthiness (benevolence) and its influence on disclosure forms of trust. Examination of the role of emotion in the reciprocal influences of trustworthiness could shed more light on our understanding of the dyadic trust process. The intersection of emotion and trust is an understudied area usually conducted as single-sided experimental research, examining either the trustor's experienced emotion (e.g., Dunn & Schweitzer, 2005) or the trustor's perceptions of the trustee's expressed emotions (e.g., Belkin & Rothman, 2017). The theoretical model proposed by Lee et al. (2023) highlights the fundamentally dyadic nature of emotions in the context of trust, and that the emotions of the trustor and the trustee are inextricably intertwined. For example, Campagna et al. (2016) found that anger expressed by a trustee can affect the trustor through an emotional contagion process and diminish trust in both the trustor and the trustee. Expression of both positive and negative emotions has been proposed as a defining feature of high-quality workplace relationships (Dutton & Heaphy, 2003). However, the tension between outward emotional expression which communicates authenticity versus emotional misrepresentation of negative feelings which communicates positivity and competence is of particular interest to workplace trust research, as it appears to impact trust differently in personal settings (e.g.,

Levine & Wald, 2019). The examination of emotion on a dyadic basis in field trust studies would be a valuable contribution to the trust literature.

Future research could also consider the embedded nature of dyadic relationships, and the influence of third parties on the dyad. Although the dyadic level of analysis adopted in the current study goes beyond most trust research which takes a unidimensional approach, trust cannot be fully understood in the context of an isolated interpersonal relationship. Trust in a dyadic relationship is affected by the network structure that surrounds it, especially in the context of organisational relationships (McEvily et al., 2021; Parker et al., 2023). Empirical social network studies have demonstrated that trust is influenced by third party relationships within professional networks (e.g., Chua et al., 2008) and coworker networks (Ferrin et al., 2006). Trust is not only shaped by direct experiences with a trustee, but also indirectly by interactions with others who have experience of the same trustee. Social network analysis allows the examination of three loci within a trust relationship (the trustor, the trustee, and the dyad) and the examination of the broader structure of trust at multiple levels (Jones & Shah; 2016; 2021). Despite its promise, social network analysis has been underutilised in organisational trust research and the extent to which trust extends beyond dyads is not well understood (Fulmer & Gelfand, 2012; McEvily et al., 2021; Parker et al., 2023).

Finally, the impact of individual differences on dyadic trust could be explored. In particular, the concept of relational identity in the workplace (Ashforth et al., 2016; Sluss & Ashforth, 2007) is of strong relevance to dyadic relationship dynamics. Relational identity refers to the extent that individuals generally define themselves in terms of connections with other individuals, thus individuals with a strong relational identity give priority to relationship development and maintenance and might internalise the values and goals of their dyadic partners (Andersen & Chen, 2002). Sources of motivation underpinning relational identity include mutual concern for the interests and outcomes of both parties, unlike

individual identity which is driven solely by self-interest, or collective identity, which is driven by concerns for group welfare and social norms (Brewer & Gardner, 1996). Relational identity may contribute to other-focused behaviours, such as helping behaviours, understanding and coworker support (Sluss & Ashforth, 2007). People high in other orientation (similar to relational identity) may be motivated to perform interpersonal citizenship behaviours by an obligation to reciprocate, whereas people low in other orientation may be motivated by expectations of reciprocity and self-interest (Korsgaard et al., 2010).

The role of relational identity in relation to trust-based organisational relationships has received very little research attention. Aspects of the individual self-concept that are associated with dyadic relationships can add further explanation to interpersonal trust dynamics, thus relational identity is of particular interest to the study of interpersonal trust. One empirical longitudinal study has found that newcomer trust development with both coworkers and leaders is influenced by levels of relational identity and is associated with higher levels of organisation identification (Schaubroeck et al., 2013). In a study on forgiveness in the workplace, employees high in relational identification were found to be more likely to forgive a transgression within a work relationship, which repairs trust through fostering relationship resilience and ensures the relationship can becomes stronger than it was prior to an offense (Thompson & Korsgaard, 2019). A further understanding of the role relational identity plays in the development of dyadic trust over time would seem to offer a fruitful line of research.

7.7   Conclusion

This research provides empirical examination of dyadic trust and longitudinal trust development over time. The study collected survey data from a sample of top management team members of small and medium-sized firms in Ireland who attended a 6-month executive team development programme. The results of the study illustrate the inherently dyadic nature of trust, the reciprocal patterns of influence of both parties, changes in trust over time, and the effects of trust incongruence in the relationship. The findings of this study contribute to the advancement of trust theory by shedding light on the nuances of dyadic trust and longitudinal trust development in established relationships. In particular, this study reveals that the strongest reciprocal elements in the trust process are the benevolence of both parties (influencing interpersonal disclosure) and the reliance of both parties (influencing interpersonal helping). It also shows that trust can change in established relationships, especially disclosure forms of trust which are traditionally slower to develop than reliance forms of trust. This study also provides evidence that trust is not necessarily balanced between two parties, which in some cases can negatively impact the benefits of trust. The study contributes to organisational practice by bringing awareness of the value of reciprocity in work relationships and of the ability to maintain and grow trust through organisational practices and organisational climate.

References

Aguinis, H., & Edwards, J. R. (2014). Methodological wishes for the next decade and how to make wishes come true. *Journal of Management Studies, 51*(1), 143–174. https://doi.org/10.1111/joms.12058

Aguinis, H., & Harden, E. E. (2009). Sample size rules of thumb: evaluating three common practices. In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends* (pp. 267–286). Routledge. https://doi.org/10.4324/9780203867266

Aguinis, H., Hill, N. S., & Bailey, J. R. (2021). Best practices in data collection and preparation: Recommendations for reviewers, editors, and authors. *Organizational Research Methods*. 24(4), 678–693. https://doi.org/10.1177/1094428119836485

Aguinis, H., Ramani, R. S., & Alabduljader, N. (2018). What you see is what you get? Enhancing methodological transparency in management research. *Academy of Management Annals*, *12*(1), 83–110. https://doi.org/10.5465/annals.2016.0011

Aguinis, H., Ramani, R. S., & Villamor, I. (2019). The first 20 years of Organizational Research Methods: Trajectory, impact, and predictions for the future. *Organizational Research Methods*, *22*(2), 463–489. https://doi.org/10.1177/1094428118786564

Ahmad, M. F., Aktas, N., & Aziz, S. (2022). Does bilateral trust matter during mergers and acquisitions negotiations?. *British Journal of Management*. Advance online publication. https://doi.org/10.1111/1467-8551.12692

Ahmed, F., Evangelista, F., & Spanjaard, D. (2021). The effects of mutuality in exporter-importer relationships. *International Marketing Review*, *38*(6), 1331–1369. https://doi.org/10.1108/IMR-12-2019-0293

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Erlbaum. https://doi.org/10.4324/9781315802428

Akaike, H. (1974). A new look at the statistical model identification. *IEEE transactions on automatic control*, *19*(6), 716–723. https://doi.org/10.1007/978-1-4612-1694-0_16

Alarcon, G. M., Capiola, A., Jessup, S. A., Ryan, T. J., & Gibson, A. M. (2022). A bifactor model of trait trust, distrust, and suspicion. *Journal of Individual Differences, 43*(2), 79–88. https://doi.org/10.1027/1614-0001/a000356

Alarcon, G. M., Lyons, J. B., Christensen, J. C., Klosterman, S. L., Bowers, M. A., Ryan, T. J., Jessup, S.A., & Wynne, K. T. (2018). The effect of propensity to trust and perceptions of trustworthiness on trust behaviors in dyads. *Behavior Research Methods*, *50*(5), 1906–1920. https://doi.org/10.3758/s13428-017-0959-6

Alarcon, G. M., Ryan, T. J., Capiola, A., Jessup, S. A., Wood, D. W., & Schneider, T. R. (2019). The dynamic interplay of trustworthiness and state suspicion in teams over time: A panel analysis. *Cogent Psychology*, *6*(1), 1619897. https://doi.org/10.1080/23311908.2019.1619897

Alexopoulos, A. N., & Buckley, F. (2013). What trust matters when: The temporal value of professional and personal trust for effective knowledge transfer. *Group & Organization Management*, *38*(3), 361–391. https://doi.org/10.1177/1059601113488939

Amason, A. C. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal*, *39*(1), 123–148. http://doi.org/10.2307/256633

Ancona, D. G., Goodman, P. S., Lawrence, B. S., & Tushman, M. L. (2001). Time: A new research lens. *Academy of Management Review*, *26*(4), 645–663. http://doi.org/10.2307/3560246

Andersen, S. M., & Chen, S. (2002). The relational self: an interpersonal social-cognitive theory. *Psychological Review*, *109*(4), 619–645. https://doi.org/10.1037/0033-295X.109.4.619

Anseel, F., Lievens, F., Schollaert, E., & Choragwicka, B. (2010). Response rates in organizational science, 1995–2008: A meta-analytic review and guidelines for survey researchers. *Journal of Business and Psychology, 25*(3), 335–349. https://doi.org/10.1007/s10869-010-9157-6

Ashford, S. J., & Tsui, A. S. (1991). Self-regulation for managerial effectiveness: The role of active feedback seeking. *Academy of Management Journal*, *34*(2), 251–280. https://doi.org/10.2307/256442

Ashforth, B. E., Schinoff, B. S., & Rogers, K. M. (2016). "I identify with her," "I identify with him": Unpacking the dynamics of personal identification in organizations. *Academy of Management Review*, *41*(1), 28–60. https://doi.org/10.5465/amr.2014.0033

Axelrod, R. (1984). The evolution of cooperation. Basic Books.

Baer, M. D., & Colquitt, J. A. (2018). Why do People Trust?: Moving toward a more comprehensive consideration of the antecedents of trust. In R. H. Searle, A. I. Nienaber, & S. B. Sitkin (Eds.), *The Routledge companion to trust* (pp. 163–182). Routledge. https://doi.org/10.4324/9781315745572

Baer, M. D., Dhensa-Kahlon, R. K., Colquitt, J. A., Rodell, J. B., Outlaw, R., & Long, D. M. (2015). Uneasy lies the head that bears the trust: The effects of feeling trusted on emotional exhaustion. *Academy of Management Journal*, *58*(6), 1637–1657. https://doi.org/10.5465/amj.2014.0246

Baer, M. D., Frank, E. L., Matta, F. K., Luciano, M. M., & Wellman, N. (2021). Undertrusted, overtrusted, or just right? The fairness of (in) congruence between trust wanted and trust received. *Academy of Management Journal*, *64*(1), 180–206. https://doi.org/10.5465/amj.2018.0334

Baer, M. D., Matta, F. K., Kim, J. K., Welsh, D. T., & Garud, N. (2018a). It's not you, it's them: Social influences on trust propensity and trust dynamics. *Personnel Psychology*, *71*(3), 423–455. https://doi.org/10.1111/peps.12265

Baer, M. D., Sessions, H., Welsh, D. T., & Matta, F. K. (2022). Motivated to "roll the dice" on trust: The relationships between employees' daily motives, risk propensity, and trust. *Journal of Applied Psychology, 107*(9), 1561–1578. https://doi.org/10.1037/apl0000959

Baer, M. D., van Der Werff, L., Colquitt, J. A., Rodell, J. B., Zipay, K. P., & Buckley, F. (2018b). Trusting the "look and feel": Situational normality, situational aesthetics, and the perceived trustworthiness of organizations. *Academy of Management Journal*, *61*(5), 1718–1740. https://doi.org/10.5465/amj.2016.0248

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative Science Quarterly*, *36*(3), 421–458. https://doi.org/10.2307/2393203

Bal, P. M., De Lange, A. H., Jansen, P. G., & Van Der Velde, M. E. (2008). Psychological contract breach and job attitudes: A meta-analysis of age as a moderator. *Journal of Vocational Behavior*, *72*(1), 143–158. https://doi.org/10.1016/j.jvb.2007.10.005

Balliet, D., Li, N. P., Macfarlan, S. J., & Van Vugt, M. (2011). Sex differences in cooperation: a meta-analytic review of social dilemmas. *Psychological Bulletin*, *137*(6), 881–909. https://doi.org/10.1037/a0025354

Balliet, D., & Van Lange, P. A. (2013). Trust, conflict, and cooperation: a meta-analysis. *Psychological Bulletin*, *139*(5), 1090–1112. https://doi.org/10.1037/a0030939

Ballinger, G. A., & Rockmann, K. W. (2010). Chutes versus ladders: Anchoring events and a punctuated-equilibrium perspective on social exchange relationships. *Academy of Management Review*, *35*(3), 373–391. https://doi.org/10.5465/amr.35.3.zok373

Barrick, M.R., Bradley, B.H., Kristof-Brown, A.L., & Colbert, A. E. (2007). The moderating role of top management team interdependence: implications for real teams and working groups. *Academy of Management Journal 50*(3), 544–557. https://doi.org/10.5465/amj.2007.25525781

Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, *61*(8), 1139–1160. https://doi.org/10.1177/0018726708094863

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Beal, D. J., Cohen, R. R., Burke, M. J., & McLendon, C. L. (2003). Cohesion and performance in groups: a meta-analytic clarification of construct relations. *Journal of Applied Psychology*, *88*(6), 989–1004. https://doi.org/10.1037/0021-9010.88.6.989

Becerra, M., & Gupta, A. K. (2003). Perceived trustworthiness within the organization: The moderating impact of communication frequency on trustor and trustee effects. *Organization Science, 14*(1), 32–44. https://doi.org/10.1287/orsc.14.1.32.12815

Becerra, M., Lunnan, R., & Huemer, L. (2008). Trustworthiness, risk, and the transfer of tacit and explicit knowledge between alliance partners. *Journal of Management Studies*, *45*(4), 691–713. https://doi.org/10.1111/j.1467-6486.2008.00766.x

Becker, T. E., Atinc, G., Breaugh, J. A., Carlson, K. D., Edwards, J. R., & Spector, P. E. (2016). Statistical control in correlational studies: 10 essential recommendations for organizational researchers. *Journal of Organizational Behavior*, *37*(2), 157–167. https://doi.org/10.1002/job.2053

Beggiato, M., Pereira, M., Petzoldt, T., & Krems, J. (2015). Learning and development of trust, acceptance and the mental model of ACC. A longitudinal on-road study. *Transportation Research Part F: Traffic Psychology and Behaviour*, *35*, 75–84. http://doi.org/10.1016/j.trf.2015.10.005

Belkin, L. Y., & Rothman, N. B. (2017). Do I trust you? Depends on what you feel: Interpersonal effects of emotions on initial trust at zero-acquaintance. *Negotiation and Conflict Management Research*, *10*(1), 3–27. https://doi.org/10.34891/y2bn-gj15

Bell, S. T., Villado, A. J., Lukasik, M. A., Belau, L., & Briggs, A. L. (2011). Getting specific about demographic diversity variable and team performance relationships: A meta-analysis. *Journal of Management*, *37*(3), 709–743. https://doi.org/10.1177/0149206310365001

Belmi, P., & Pfeffer, J. (2015). How "organization" can weaken the norm of reciprocity: The effects of attributions for favors and a calculative mindset. *Academy of Management Discoveries*, *1*(1), 36–57. http://doi.org/10.5465/amd.2014.0015

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*(2), 238–246. https://doi.org/10.1037/0033-2909.107.2.238

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*(3), 588–606. https://doi.org/10.1037/0033-2909.88.3.588

Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic Behavior*, *10*(1), 122–142. http://doi.org/10.1006/game.1995.1027

Bergeron, D. M., Shipp, A. J., Rosen, B., & Furst, S. A. (2013). Organizational citizenship behavior and career outcomes: The cost of being a good citizen. *Journal of Management, 39*(4), 958–984. https://doi.org/10.1177/0149206311407508

Bernerth, J. B., & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel Psychology, 69*(1), 229–283. https://doi.org/10.1111/peps.12103

Bernerth, J. B., Armenakis, A. A., Feild, H. S., Giles, W. F., & Walker, H. J. (2007). Leader–member social exchange (LMSX): Development and validation of a scale. *Journal of Organizational Behavior, 28*(8), 979–1003. https://doi.org/10.1002/job.443

Berscheid, E. (1999). The greening of relationship science. *American Psychologist, 54*(4), 260–266. https://doi.org/10.1037/0003-066X.54.4.260

Biesanz, J. C., Deeb-Sossa, N., Papadakis, A. A., Bollen, K. A., & Curran, P. J. (2004). The role of coding time in estimating and interpreting growth curve models. *Psychological Methods, 9*(1), 30–52. https://doi.org/doi/10.1037/1082-989X.9.1.30

Blau, P. M. (1964). *Exchange and power in social life*. Transaction Publishers. https://doi.org/10.4324/9780203792643

Bliese, P. D. (1998). Group size, ICC values, and group-level correlations: A simulation. *Organizational Research Methods, 1*(4), 355–373. https://doi.org/10.1177/109442819814001

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 349 –381). Jossey-Bass.

Blomqvist, K., & Cook, K. S. (2018). Swift trust: State-of-the-art and future research directions. In R. H. Searle, A. I. Nienaber, & S. B. Sitkin (Eds.), *The Routledge companion to trust* (pp. 29–49). Routledge. https://doi.org/10.4324/9781315745572

Blustein, D. L. (2011). A relational theory of working. *Journal of Vocational Behavior, 79*(1), 1–17. http://doi.org/10.1016/j.jvb.2010.10.004

Bolino, M. C., & Grant, A. M. (2016). The bright side of being prosocial at work, and the dark side, too: A review and agenda for research on other-oriented motives, behavior, and impact in organizations. *Academy of Management Annals, 10*(1), 599–670. http://doi.org/10.1080/19416520.2016.1153260

Bollen, K. A. (1989). *Structural equations with latent variables*. Wiley. https://doi.org/10.1002/9781118619179

Bollen, K. A., & Curran, P. J. (2006). *Latent curve models: A structural equation perspective*. Wiley. https://doi.org/10.1007/s11336-007-9011-6

Boone, C., & Hendriks, W. (2009). Top management team diversity and firm performance: Moderators of functional-background and locus-of-control diversity. *Management Science, 55*(2), 165–180. https://doi.org/10.1287/mnsc.1080.0899

Bowlby, J. (1982). Attachment and loss: retrospect and prospect. *American Journal of Orthopsychiatry, 52*(4), 664–678. https://doi.org/10.1111/j.1939-0025.1982.tb01456.x

Bowler, W. M., & Brass, D. J. (2006). Relational correlates of interpersonal citizenship behavior: A social network perspective. *Journal of Applied Psychology, 91*(1), 70–82. https://doi.org/10.1037/0021-9010.91.1.70

Brannick, M. T., Chan, D., Conway, J. M., Lance, C. E. & Spector, P. E. (2010). What is method variance and how can we cope with it? A panel discussion. *Organizational Research Methods, 13*(3), 407–420. https://doi.org/10.1177/1094428109360993

Branzei, O., Vertinsky, I., & Camp, R. D. (2007). Culture-contingent signs of trust in emergent relationships. *Organizational Behavior and Human Decision Processes*, *104*(1), 61–82. https://doi.org/10.1016/j.obhdp.2006.11.002

Brattström, A., Faems, D., & Mähring, M. (2019). From trust convergence to trust divergence: Trust development in conflictual interorganizational relationships. *Organization Studies*, *40*(11), 1685–1711. https://doi.org/10.1177/0170840618789195

Breuer, C., Hüffmeier, J., & Hertel, G. (2016). Does trust matter more in virtual teams? A meta-analysis of trust and team effectiveness considering virtuality and documentation as moderators. *Journal of Applied Psychology*, *101*(8), 1151–1177. https://doi.org/10.1037/apl0000113

Brewer, M. B., & Gardner, W. (1996). Who is this" We"? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, *71*(1), 83–93. http://doi.org/10.1037/0022-3514.71.1.83

Bromiley, P., & Rau, D. (2016). Social, behavioral, and cognitive influences on upper echelons during strategy process: A literature review. *Journal of Management*, *42*(1), 174–202. https://doi.org/10.1177/0149206315617240

Brower, H., Lester, S., Korsgaard, A., & Dineen, B. (2009). A closer look at trust between managers and subordinates: Understanding the effects of both trusting and being trusted on subordinate outcomes. *Journal of Management, 35*(2), 327–347. https://doi.org/10.1177/0149206307312511

Brower, H.H., Schoorman, F.D., & Tan, H.H. (2000). A model of relational leadership: the integration of trust and leader-member exchange. *Leadership Quarterly, 11*(2), 227–250. https://doi.org/10.1016/S1048-9843(00)00040-0

Brown, T. A., & Moore, M. T. (2012). Confirmatory factor analysis. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 361–379). The Guilford Press.

Bstieler, L., Hemmert, M., & Barczak, G. (2017). The changing bases of mutual trust formation in inter-organizational relationships: A dyadic study of university-industry research collaborations. *Journal of Business Research, 74*, 47–54. https://doi.org/10.1016/j.jbusres.2017.01.006

Buchan, N. R., Croson, R. T., & Solnick, S. (2008). Trust and gender: An examination of behavior and beliefs in the Investment Game. *Journal of Economic Behavior & Organization*, *68*(3-4), 466–476. https://doi.org/10.1016/j.jebo.2007.10.006

Burrell, G. & Morgan, G. (1979). *Sociological paradigms and organizational analysis.* Heinemann.

Buvik, M. P., & Rolfsen, M. (2015). Prior ties and trust development in project teams–A case study from the construction industry. *International Journal of Project Management*, *33*(7), 1484-1494. https://doi.org/10.1016/j.ijproman.2015.06.002

Campagna, R. L., Dirks, K. T., Knight, A. P., Crossley, C., & Robinson, S. L. (2020). On the relation between felt trust and actual trust: Examining pathways to and implications of leader trust meta-accuracy. *Journal of Applied Psychology*, *105*(9), 994–1012. http://doi.org/10.1037/apl0000474

Campagna, R. L., Mislin, A. A., Dirks, K. T., & Elfenbein, H. A. (2022). The (mostly) robust influence of initial trustworthiness beliefs on subsequent behaviors and perceptions. *Human Relations*, *75*(7), 1383–1411. https://doi.org/10.1177/00187267211002905

Campagna, R. L., Mislin, A. A., Kong, D. T., & Bottom, W. P. (2016). Strategic consequences of emotional misrepresentation in negotiation: The blowback effect. *Journal of Applied Psychology*, *101*(5), 605–624. http://doi.org/10.1037/apl0000072

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*(2), 81–105. https://doi.org/10.1037/h0046016

Carlson, K. D., & Wu, J. (2012). The illusion of statistical control: Control variable practice in management research. *Organizational Research Methods*, *15*(3), 413–435. https://doi.org/10.1177/1094428111428817

Carmeli, A. (2008). Top management team behavioral integration and the performance of service organizations. *Group & Organization Management,* 33(6), 712–735. https://doi.org/10.1177/1059601108325696

Carmeli, A., Friedman, Y., & Tishler, A. (2013). Cultivating a resilient top management team: The importance of relational connections and strategic decision comprehensiveness. *Safety Science*, *51*(1), 148–159. https://doi.org/10.1016/j.ssci.2012.06.002

Carmeli, A., Schaubroeck, J. (2006). Top management team behavioral integration, decision quality, and organizational decline. *Leadership Quarterly 17*(5), 441–453. https://doi.org/10.1016/j.leaqua.2006.06.001

Carmeli, A., Schaubroeck, J., & Tishler, A. (2011). How CEO empowering leadership shapes top management team processes: Implications for firm performance. *Leadership Quarterly*, *22*(2), 399–411. https://doi.org/10.1016/j.leaqua.2011.02.013

Carmeli, A., & Shteigman, A. (2010). Top management team behavioral integration in small-sized firms: A social identity perspective. *Group Dynamics: Theory, Research, and Practice*, *14*(4), 318–331. https://doi.org/10.1037/a0018254

Carpenter, M. A., Geletkanycz, M. A., & Sanders, W. G. (2004). Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management,* 30(6), 749–778. https://doi.org/10.1016/j.jm.2004.06.001

Carter, M. Z., & Mossholder, K. W. (2015). Are we on the same page? The performance effects of congruence between supervisor and group trust. *Journal of Applied Psychology*, *100*(5), 1349–1363. https://doi.org/10.1037/a0038798

Certo, S. T., Lester, R. H., Dalton, C. M., & Dalton, D. R. (2006). Top management teams, strategy and financial performance: A meta-analytic examination. *Journal of Management Studies, 43*(4), 813–839. https://doi.org/10.1111/j.1467-6486.2006.00612.x

Chan, D. (1998). The conceptualization and analysis of change over time: An integrative approach incorporating longitudinal mean and covariance structures analysis (LMACS) and multiple indicator latent growth modeling (MLGM). *Organizational Research Methods*, *1*(4), 421–483. https://doi.org/10.1177%2F109442819814004

Chan, D. (2003). Data analysis and modeling longitudinal processes. *Group & Organization Management*, *28*(3), 341–365. http://doi.org/10.1177/1059601102250814

Chan, D. (2009). So why ask me? Are self-report data really that bad? In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends* (pp. 311–338). Routledge. https://doi.org/10.4324/9780203867266

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, *14*(3), 464–504. https://doi.org/10.1080/10705510701301834

Chen, G., Ployhart, R. E., Thomas, H. C., Anderson, N., & Bliese, P. D. (2011). The power of momentum: A new model of dynamic relationships between job satisfaction change and turnover intentions. *Academy of Management Journal*, *54*(1), 159–181. https://doi.org/10.5465/amj.2011.59215089

Cheng, X., Yin, G., Azadegan, A., & Kolfschoten, G. (2016). Trust evolvement in hybrid team collaboration: A longitudinal case study. *Group Decision and Negotiation*, *25*(2), 267–288. https://doi.org/10.1007/s10726-015-9442-x

Cheung, G. W., & Lau, R. S. (2012). A direct comparison approach for testing measurement invariance. *Organizational Research Methods*, *15*(2), 167–198. https://doi.org/10.1177/1094428111421987

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, *9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Cheung, M. F., Wong, C. S., & Yuan, G. Y. (2017). Why mutual trust leads to highest performance: the mediating role of psychological contract fulfillment. *Asia Pacific Journal of Human Resources*, *55*(4), 430–453. https://doi.org/10.1111/1744-7941.12117

Chiaburu, D. S., & Harrison, D. A. (2008). Do peers make the place? Conceptual synthesis and meta-analysis of coworker effects on perceptions, attitudes, OCBs, and performance. *Journal of Applied Psychology*, *93*(5), 1082–1103. https://doi.org/10.1037/0021-9010.93.5.1082

Chiaburu, D. S., & Lim, A. S. (2008). Manager trustworthiness or interactional justice? Predicting organizational citizenship behaviors. *Journal of Business Ethics*, *83*(3), 453–467. https://doi.org/10.1007/s10551-007-9631-x

Chua, R. Y. J., Ingram, P., & Morris, M. W. (2008). From the head and the heart: Locating cognition-and affect-based trust in managers' professional networks. *Academy of Management Journal*, *51*(3), 436-452. https://doi.org/10.5465/AMJ.2008.32625956

Chua, R. Y., Morris, M. W., & Ingram, P. (2009). Guanxi vs networking: Distinctive configurations of affect-and cognition-based trust in the networks of Chinese vs American managers. *Journal of International Business Studies*, *40*(3), 490-508. https://doi.org/10.1057/palgrave.jibs.8400422

Chughtai, A. A. (2022). Trust propensity and job performance: The mediating role of psychological safety and affective commitment. *Current Psychology*, *41*(10), 6934–6944. https://doi.org/10.1007/s12144-020-01157-6

Chughtai A, & Buckley F. (2013). Exploring the impact of trust on research scientists' work engagement. *Personnel Review*, *42*(4), 396–421. https://doi.org/10.1108/PR-06-2011-0097

Chung, Y., & Jackson, S. E. (2011). Co-worker trust and knowledge creation: A multilevel analysis. *Journal of Trust Research*, *1*(1), 65–83. https://doi.org/10.1080/21515581.2011.552425

Clark, K. D., & Maggitti, P. G. (2012). TMT potency and strategic decision-making in high technology firms. *Journal of Management Studies*, *49*(7), 1168–1193. https://doi.org/10.1111/j.1467-6486.2012.01060.x

Clark, M. S., & Mills, J. (1979). Interpersonal attraction in exchange and communal relationships. *Journal of Personality and Social Psychology, 37*(1), 12–24. https://doi.org/10.1037/0022-3514.37.1.12

Clark, M. S., & Mills, J. (1993). The difference between communal and exchange relationships: What it is and is not. *Personality and Social Psychology Bulletin, 19*(6), 684–691. https://doi.org/10.1177/0146167293196003

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155–159. https://doi.org/10.1037/0033-2909.112.1.155

Colbert, A. E., Barrick, M. R., & Bradley, B. H. (2014). Personality and leadership composition in top management teams: Implications for organizational effectiveness. *Personnel Psychology*, *67*(2), 351–387. https://doi.org/10.1111/peps.12036

Colbert, A. E., Bono, J. E., & Purvanova, R. K. (2016). Flourishing via workplace relationships: Moving beyond instrumental support. *Academy of Management Journal*, *59*(4), 1199–1223. https://doi.org/10.5465/amj.2014.0506

Colquitt, J. A., Baer, M. D., Long, D. M., & Halvorsen-Ganepola, M. D. (2014). Scale indicators of social exchange relationships: A comparison of relative content validity. *Journal of Applied Psychology*, *99*(4), 599–618. https://doi.org/10.1037/a0036374

Colquitt, J. A., LePine, J. A., Zapata, C. P., & Wild, R. E. (2011). Trust in typical and high-reliability contexts: Building and reacting to trust among firefighters. *Academy of Management Journal*, *54*(5), 999–1015. https://doi.org/10.5465/amj.2006.0241

Colquitt, J. A., & Rodell, J. B. (2011). Justice, trust, and trustworthiness: A longitudinal analysis integrating three theoretical perspectives. *Academy of Management Journal*, *54*(6), 1183–1206. https://doi.org/10.5465/amj.2007.0572

Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology, 92*(4), 909–927. https://doi.org/10.1037/0021-9010.92.4.909

Colquitt, J. A., Scott, B. A., Rodell, J. B., Long, D. M., Zapata, C. P., Conlon, D. E., & Wesson, M. J. (2013). Justice at the millennium, a decade later: A meta-analytic test of social exchange and affect-based perspectives. *Journal of Applied Psychology*, *98*(2), 199–236. https://doi.org/10.1037/a0031757

Colquitt, J. A., & Zapata-Phelan, C. P. (2007). Trends in theory building and theory testing: A five-decade study of the Academy of Management Journal. *Academy of Management Journal*, *50*(6), 1281–1303. https://doi.org/10.5465/amj.2007.28165855

Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology*, *25*(3), 325–334. https://doi.org/10.1007/s10869-010-9181-6

Cortina, J. M. (1993). Interaction, nonlinearity, and multicollinearity: Implications for multiple regression. *Journal of Management*, *19*(4), 915–922. http://doi.org/10.1177/014920639301900411

Cortina, J. (2020). On the whys and hows of quantitative research. *Journal of Business Ethics*. *167*(1), 19–29. https ://doi.org/10.1007/s1055 1-019- 04195 -8

Cortina, J. M., Aguinis, H., & DeShon, R. P. (2017). Twilight of dawn or of evening? A century of research methods in the Journal of Applied Psychology. *Journal of Applied Psychology*, *102*(3), 274 –290. https://doi.org/10.1037/apl0000163

Costa, A. C., Fulmer, C. A., & Anderson, N. R. (2018). Trust in work teams: An integrative review, multilevel model, and future directions. *Journal of Organizational Behavior*, *39*(2), 169–184. https://doi.org/10.1002/job.2213

Costa, P. T., & McCrae, R. R. (1992). Four ways five factors are basic. *Personality and Individual Differences, 13,* 653–665. http://doi.org/10.1016/j.addbeh.2014.01

Courtright, S. H., Thurgood, G. R., Stewart, G. L., & Pierotti, A. J. (2015). Structural interdependence in teams: An integrative framework and meta-analysis. *Journal of Applied Psychology*, *100*(6), 1825–1846. https://doi.org/10.1037/apl0000027

Coyle-Shapiro, J. A., & Diehl, M. R. (2018). Social Exchange Theory: Where is trust? In R. H. Searle, A. I. Nienaber, & S. B. Sitkin (Eds.), *The Routledge companion to trust* (pp. 197–217). Routledge. https://doi.org/10.4324/9781315745572

Coyle-Shapiro, J. A. M., Pereira Costa, S., Doden, W., & Chang, C. (2019). Psychological contracts: Past, present, and future. *Annual Review of Organizational Psychology and Organizational Behavior*, *6*(1), 145–169. https://doi.org/10.1146/annurev-orgpsych-012218-015212

Crisp, C. B., & Jarvenpaa, S. L. (2013). Swift trust in global virtual teams: Trusting beliefs and normative actions. *Journal of Personnel Psychology*, *12*(1), 45–56. http://doi.org/10.1027/1866-5888/a000075

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297–334. https://doi.org/10.1007/BF02310555

Cronbach, L. J., & Furby, L. (1970). How we should measure "change": Or should we? *Psychological Bulletin, 74*(1), 68–80. https://doi.org/10.1037/h0029382

Cropanzano, R., Anthony, E. L., Daniels, S. R., & Hall, A. V. (2017). Social exchange theory: A critical review with theoretical remedies. *Academy of Management Annals*, *11*(1), 479–516. https://doi.org/10.5465/annals.2015.0099

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management, 31*(6), 874–900. https://doi.org/10.1177/0149206305279602

Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic literature*, *47*(2), 448–74. http://doi.org/10.1257/jel.47.2.448

Cuevas, J. M., Julkunen, S., & Gabrielsson, M. (2015). Power symmetry and the development of trust in interdependent relationships: The mediating role of goal congruence. *Industrial Marketing Management*, *48*, 149–159. http://doi.org/10.1016/j.indmarman.2015.03.015

Cycyota, C. S., & Harrison, D. A. (2006). What (not) to expect when surveying executives: A meta-analysis of top manager response rates and techniques over time. *Organizational Research Methods*, *9*(2), 133–160. https://doi.org/10.1177/1094428105280770

Dalal, D. K., & Carter, N. T. (2015). Negatively worded items negatively impact survey research. In C. E. Lance & R. J. Vandenberg (Eds.), *More statistical and methodological myths and urban legends* (pp. 112–132). Routledge. https://doi.org/10.4324/9780203775851

DeChurch, L. A., & Mesmer-Magnus, J. R. (2010). The cognitive underpinnings of effective teamwork: A meta-analysis. *Journal of Applied Psychology*, *95*(1), 32–53. https://doi.org/10.1037/a0017328

de Jong, B. A., & Dirks, K. T. (2012). Beyond shared perceptions of trust and monitoring in teams: Implications of asymmetry and dissensus. *Journal of Applied Psychology*, *97*(2), 391–406. https://doi.org/10.1037/a0026483

de Jong, B. A., Dirks, K. T., & Gillespie, N. (2016). Trust and team performance: A meta-analysis of main effects, moderators, and covariates. *Journal of Applied Psychology*, *101*(8), 1134–1150. http://doi.org/10.1037/apl0000110

de Jong, B., Gillespie, N., Williamson, I., & Gill, C. (2021). Trust consensus within culturally diverse teams: A multistudy investigation. *Journal of Management*, *47*(8), 2135–-2168. https://doi.org/10.1177/0149206320943658

de Jong, B. A., Kroon, D. P., & Schilke, O. (2017). The future of organizational trust research: A content-analytic synthesis of scholarly recommendations and review of recent developments. In P. A. M. Van Lange, B. Rockenbach, & T. Yamagishi (Eds.), *Trust in social dilemmas* (pp. 173–194). Oxford University Press. https://doi.org/10.1093/oso/9780190630782.003.0010

de Jong, S. B., Van der Vegt, G. S., & Molleman, E. (2007). The relationships among asymmetry in task dependence, perceived helping behavior, and trust. *Journal of Applied Psychology*, *92*(6), 1625–1637. https://doi.org/10.1037/0021-9010.92.6.1625

Deutsch, M. (1958). Trust and suspicion. *Journal of Conflict Resolution, 2*(4), 265–279. http://doi.org/10.1177/002200275800200401

Deutsch, M. (1960). The effect of motivational orientation upon trust and suspicion. *Human Relations*, *13*(2), 123–139. https://doi.org/10.1177/001872676001300202

De Wit, F. R., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup conflict: a meta-analysis. *Journal of Applied Psychology*, *97*(2), 360–390. https://doi.org/10.1037/a0024844

Dietz, G. (2011). Going back to the source: Why do people trust each other? *Journal of Trust Research*, *1*(2), 215–222. https://doi.org/10.1080/21515581.2011.603514

Dietz, G., & Den Hartog, D. N. (2006). Measuring trust inside organisations. *Personnel Review (5),* 557–588. https://doi.org/10.1108/00483480610682299

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48*(2), 147–160. https://doi.org/10.2307/2095101

Dirks, K. T., & de Jong, B. (2022). Trust within the workplace: A review of two waves of research and a glimpse of the third. *Annual Review of Organizational Psychology and Organizational Behavior*, *9*, 247–276. https://doi.org/10.1146/annurev-orgpsych-012420-083025

Dirks, K. T., & Ferrin, D. L. (2001). The role of trust in organizational settings. *Organization Science, 12*(4), 450–467. https://doi.org/10.1287/orsc.12.4.450.10640

Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, *87*(4), 611–628. https://doi.org/10.1037//0021-9010.87.4.611

Dirks, K. T., & Skarlicki, D. P. (2009). The relationship between being perceived as trustworthy by coworkers and individual performance. *Journal of Management*, *35*(1), 136–157. https://doi.org/10.1177/0149206308321545

Dirks, K. T., Sweeney, P. J., Dimotakis, N., & Woodruff, T. (2021). Understanding the change and development of trust and the implications for new leaders. *Journal of Business Ethics*, *180*(2), 711–730. https://doi.org/10.1007/s10551-021-04902-4

Doney, P. M., Cannon, J. P., & Mullen, M. R. (1998). Understanding the influence of national culture on the development of trust. *Academy of Management Review*, *23*(3), 601–620. https://doi.org/10.2307/259297

Drescher, M. A., Korsgaard, M. A., Welpe, I. M., Picot, A., & Wigand, R. T. (2014). The dynamics of shared leadership: Building trust and enhancing performance. *Journal of Applied Psychology*, *99*(5), 771–783. https://doi.org/10.1037/a0036474

Dunn, J. R., & Schweitzer, M. E. (2005). Feeling and believing: The influence of emotion on trust. *Journal of Personality and Social Psychology, 88*(5), 736–748. https://doi.org/10.1037/0022-3514.88.5.736

du Plessis, C., Nguyen, M. H. B., Foulk, T. A., & Schaerer, M. (2023). Relative power and interpersonal trust. *Journal of Personality and Social Psychology*, *124*(3), 567–592. http://doi.org/10.1037/pspi0000401

Dutton, J., & Heaphy, E. (2003). The power of high quality connections. In K. Cameron, J. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations for a new discipline* (pp. 263–278). Berrett-Koehler. https://doi.org/10.1080/10967490600767035

Eagly, A. H., Nater, C., Miller, D. I., Kaufmann, M., & Sczesny, S. (2020). Gender stereotypes have changed: A cross-temporal meta-analysis of US public opinion polls from 1946 to 2018. *American Psychologist*, *75*(3), 301–315. http://doi.org/10.1037/amp0000494

Eby, L. T., & Robertson, M. M. (2020). The psychology of workplace mentoring relationships. *Annual Review of Organizational Psychology and Organizational Behavior*, *7*(1), 75–100. https://doi.org/10.1146/annurev-orgpsych-012119-044924

Edmondson, A. C., & McManus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review*, *32*(4), 1246–1264. https://doi.org/10.5465/amr.2007.26586086

Edwards, J. R. (2020). The peaceful coexistence of ethics and quantitative research. *Journal of Business Ethics*, *167*(1), 31–40. https://doi.org/10.1007/s10551-019-04197-6

Ehrhardt, K., & Ragins, B. R. (2019). Relational attachment at work: A complementary fit perspective on the role of relationships in organizational life. *Academy of Management Journal*, *62*(1), 248–282. https://doi.org/10.5465/amj.2016.0245

Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, *32*(3), 543–576. https://doi.org/10.5465/256434

Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, *2*(1), 335–362. https://doi.org/10.1146/annurev.so.02.080176.002003

Ensley, M. D., Hmieleski, K. M., & Pearce, C. L. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. *Leadership Quarterly, 17*(3), 217–231. https://doi.org/10.1016/j.leaqua.2006.02.002

Ensley, M. D., & Pearce, C. L. (2001). Shared cognition in top management teams: Implications for new venture performance. *Journal of Organizational Behavior, 22*(2), 145–160. https://doi.org/10.1002/job.83

Ensley, M. D., Pearson, A. W., & Amason, A. C. (2002). Understanding the dynamics of new venture top management teams: Cohesion, conflict, and new venture performance. *Journal of Business Venturing, 17*(4), 365–386. https://doi.org/10.1016/S0883-9026(00)00065-3

European Commission (2019a). *EU policy framework on SMEs: State of play and challenges.* Publications Office of the European Union. https://doi:10.2863/612657

European Commission (2019b). *SBA Fact Sheet: Ireland*. Publications Office of the European Union. https://ec.europa.eu/docsroom/documents/38662/attachments/15/translations/en/renditions/native

Evans, J. B., & Schilke, O. (2023). The power to reward vs. the power to punish: The influence of power framing on individual-level exploration. *Organization Science*. Advance online publication. https://doi.org/10.1287/orsc.2023.1672

Feenstra, S., Jordan, J., Walter, F., & Stoker, J. I. (2020). Antecedents of leaders' power sharing: The roles of power instability and distrust. *Organizational Behavior and Human Decision Processes*, *157*, 115–128. https://doi.org/10.1016/j.obhdp.2020.01.005

Feitosa, J., Grossman, R., Kramer, W. S., & Salas, E. (2020). Measuring team trust: A critical and meta-analytical review. *Journal of Organizational Behavior*, *41*(5), 479–501. https://doi.org/10.1002/job.2436

Ferres, N., Connell, J., & Travaglione, A. (2004). Co-worker trust as a social catalyst for constructive employee attitudes. *Journal of Managerial Psychology, 19*(6), 608–622. https://doi.org/10.1108/02683940410551516

Ferrin, D. L., Bligh, M. C., & Kohles, J. C. (2007). Can I trust you to trust me? A theory of trust, monitoring, and cooperation in interpersonal and intergroup relationships. *Group & Organization Management*, *32*(4), 465–499. https://doi.org/10.1177/1059601106293960

Ferrin, D. L., Bligh, M. C., & Kohles, J. C. (2008). It takes two to tango: An interdependence analysis of the spiraling of perceived trustworthiness and cooperation in interpersonal and

intergroup relationships. *Organizational Behavior and Human Decision Processes*, *107*(2), 161–178. https://doi.org/10.1016/j.obhdp.2008.02.012

Ferrin, D. L., Bligh, M. C., & Kohles, J. C. (2012). The actor–partner interdependence model: a method for studying trust in dyadic relationships. In F. Lyon, G. Möllering, & M. Saunders (Eds.), *Handbook of research methods on trust* (pp. 189–198). Edward Elgar.

Ferrin, D. L., Dirks, K. T., & Shah, P. P. (2006). Direct and indirect effects of third-party relationships on interpersonal trust. *Journal of Applied Psychology*, *91*(4), 870–883. https://doi.org/10.1037/0021-9010.91.4.870

Ferrin, D. L., & Gillespie, N. (2010). Trust differences across national-societal cultures: Much to do, or much ado about nothing. In M. Saunders, D. Skinner, G. Dietz, N. Gillespie, & R. Lewicki (Eds.) *Organizational trust: A cultural perspective* (pp. 42–86). Cambridge University Press, https://doi.org/10.1017/CBO9780511763106.002

Ferris, G. R., Liden, R. C., Munyon, T. P., Summers, J. K., Basik, K. J., & Buckley, M. R. (2009). Relationships at work: Toward a multidimensional conceptualization of dyadic work relationships. *Journal of Management*, *35*(6), 1379–1403. https://doi.org/10.1177/0149206309344741

Finkel, E. J., Eastwick, P. W., & Reis, H. T. (2015). Best research practices in psychology: Illustrating epistemological and pragmatic considerations with the case of relationship science. *Journal of Personality and Social Psychology*, *108*(2), 275–297. https://doi.org/10.1037/pspi0000007

Finkel, E., & Simpson, J. (2015). Editorial overview: Relationship science. *Current Opinion in Psychology, 1*(1), 5–9. https://doi.org/10.1016/j.copsyc.2015.01.012

Finkel, E. J., Simpson, J. A., & Eastwick, P. W. (2017). The psychology of close relationships: Fourteen core principles. *Annual Review of Psychology*, *68*(1), 383–411. https://doi.org/10.1146/annurev-psych-010416-044038

Fitzpatrick, J., & Lafontaine, M. F. (2017). Attachment, trust, and satisfaction in relationships: Investigating actor, partner, and mediating effects. *Personal Relationships*, *24*(3), 640–662. https://doi.org/10.1111/pere.12203

Flores, F., & Solomon, R. C. (1998). Creating Trust. *Business Ethics Quarterly*, *8*(2), 205–232. https://doi.org/10.2307/3857326

Frazier, M., Gooty, J., Little, L., & Nelson, D. (2015). Employee attachment: Implications for supervisor trustworthiness and trust. *Journal of Business and Psychology, 30*(2), 373–386. https://doi.org/10.1007/s10869-014-9367-4

Frazier, M. L., Johnson, P. D., & Fainshmidt, S. (2013). Development and validation of a propensity to trust scale. *Journal of Trust Research*, *3*(2), 76–97. https://doi.org/10.1080/21515581.2013.820026

Frazier, M. L., Johnson, P. D., Gavin, M., Gooty, J., & Snow, D. B. (2010). Organizational justice, trustworthiness, and trust: A multifoci examination. *Group & Organization Management, 35*(1), 39–76. https://doi.org/10.1177%2F1059601109354801

Frazier, M. L., Tupper, C., & Fainshmidt, S. (2016). The path(s) to employee trust in direct supervisor in nascent and established relationships: A fuzzy set analysis. *Journal of Organizational Behavior*, *37*(7), 1023–1043. https://doi.org/10.1002/job.2091

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, *69*(8), 3192–3198. https://doi.org/10.1016/j.jbusres.2015.12.008

Fulmer, A., & Dirks, K. (2018). Multilevel trust: A theoretical and practical imperative. *Journal of Trust Research*, *8*(2), 137–141. https://doi.org/10.1080/21515581.2018.1531657

Fulmer, C. A., & Gelfand, M. J. (2012). At what level (and in whom) we trust: Trust across multiple organizational levels. *Journal of Management, 38*(4), 1167–1230. https://doi.org/10.1177/0149206312439327

Gabriel, A. S., Koopman, J., Rosen, C. C., Arnold, J. D., & Hochwarter, W. A. (2020). Are coworkers getting into the act? An examination of emotion regulation in coworker exchanges. *Journal of Applied Psychology, 105*(8), 907–929. https://doi.org/10.1037/apl0000473

Gabriel, A. S., Koopman, J., Rosen, C. C., & Johnson, R. E. (2018). Helping others or helping oneself? An episodic examination of the behavioral consequences of helping at work. *Personnel Psychology*, *71*(1), 85–107. https://doi.org/10.1111/peps.12229

Gargiulo, M., & Ertug, G. (2006). The dark side of trust. In R. Bachmann & A. Zaheer (Eds.), *Handbook of trust research* (pp. 165–186). Edward Elgar. http://doi.org/10.4337/9781847202819.00016

George, J. M., & Jones, G. R. (2000). The role of time in theory and theory building. *Journal of Management*, *26*(4), 657–684. http://doi.org/10.1177/014920630002600404

Gersick, C. J., Bartunek, J. M, & Dutton, J. E. (2000). Learning from academia: The importance of relationships in professional life. *Academy of Management Journal*, *43*(6), 1026–1044. https://doi.org/10.5465/1556333

GDPR. (2016). *General Data Protection Regulation*. Publications Office of the European Union. Retrieved June 3, 2023, from https://op.europa.eu/en/publication-detail/-/publication/3e485e15-11bd-11e6-ba9a-01aa75ed71a1/language-en

Ghosh, R. (2014). Antecedents of mentoring support: A meta-analysis of individual, relational, and structural or organizational factors. *Journal of Vocational Behavior*, *84*(3), 367–384. https://doi.org/10.1016/j.jvb.2014.02.009

Gibson, J. J. (1977). The theory of affordances. In R. E. Shaw, & J. Bransford (Eds.), *Perceiving, acting, and knowing: Toward an ecological psychology* (pp. 67–82). Lawrence Erlbaum Associates. https://doi.org/10.4324/9781315467931

Gibson, K. R. (2018). Can I tell you something? How disruptive self-disclosure changes who "we" are. *Academy of Management Review*, *43*(4), 570–589. https://doi.org/10.5465/amr.2016.0317

Gibson, K. R., Harari, D., & Marr, J. C. (2018). When sharing hurts: How and why self-disclosing weakness undermines the task-oriented relationships of higher status disclosers. *Organizational Behavior and Human Decision Processes*, *144*, 25-43. http://doi.org/10.1016/j.obhdp.2017.09.001

Gillespie, N. (2003). *Measuring trust in working relationships: The behavioral trust inventory*. Paper presented at the 3rd European Academy of Management Conference, Milano, Italy.

Gillespie, N. (2012). Measuring trust in organizational contexts: An overview of survey-based measures. In F. Lyon, G. Möllering, & M. Saunders (Eds.), *Handbook of research methods on trust* (pp. 175–188). Edward Elgar. https://doi.org/10.4337/9780857932013

Gillespie, N. (2015). Survey measures of trust in organizational contexts: An overview. In F. Lyon, G. Möllering, & M. Saunders (Eds.), *Handbook of research methods on trust* (2nd ed., pp. 225–239). Edward Elgar. https://doi.org/10.4337/9781782547419

Golembiewski, R. T., Billingsley, K., & Yeager, S. (1976). Measuring change and persistence in human affairs: Types of change generated by OD designs. *Journal of Applied Behavioral Science, 12,* 133– 157. https://doi.org/10.1177/002188637601200201

Goodman, J. S., & Blum, T. C. (1996). Assessing the non-random sampling effects of subject attrition in longitudinal research. *Journal of Management*, *22*(4), 627–652. https://doi.org/10.1177/014920639602200405

Gooty, J., & Yammarino, F. J. (2011). Dyads in organizational research: Conceptual issues and multilevel analyses. *Organizational Research Methods*, *14*(3), 456–483. https://doi.org/10.1177/1094428109358271

Gouldner, A. (1960). The norm of reciprocity. A preliminary statement. *American Sociological Review, 25*(2), 161–178. https://doi.10.2307/2092623

Graebner, M. E., Lumineau, F., & Fudge Kamal, D. (2020). Unrequited: Asymmetry in interorganizational trust. *Strategic Organization*, *18*(2), 362–374. https://doi.org/10.1177/1476127018808465

Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology, 60*, 549–576. https://doi.org/10.1146/annurev.psych.58.110405.085530

Grant, A. M., & Parker, S. K. (2009). 7 redesigning work design theories: the rise of relational and proactive perspectives. *Academy of Management Annals*, *3*(1), 317–375. https://doi.org/10.5465/19416520903047327

Grant, A. M., & Sumanth, J. J. (2009). Mission possible? The performance of prosocially motivated employees depends on manager trustworthiness. *Journal of Applied Psychology, 94*(4), 927–944. https://doi.org/10.1037/a0014391

Greco, L. M., Whitson, J. A., O'Boyle, E. H., Wang, C. S., & Kim, J. (2019). An eye for an eye? A meta-analysis of negative reciprocity in organizations. *Journal of Applied Psychology*, *104*(9), 11177–1143. http://doi.org/10.1037/apl0000396

Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, *50*(2), 327–347. http://doi.org/10.5465/amj.2007.24634438

Groves, R. M., Cialdini, R. B., & Couper, M. P. (1992). Understanding the decision to participate in a survey. *Public Opinion Quarterly*, *56*(4), 475–495. https://doi.org/10.1086/269338

Groves, R. M., Singer, E., & Corning, A. (2000). Leverage-saliency theory of survey participation: description and an illustration. *Public Opinion Quarterly*, *64*(3), 299–308. https://doi.org/10.1086/317990

Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency, and performance: interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology*, *87*(5), 819. https://doi.org/10.1037/0021-9010.87.5.819

Gupta, N., Ho, V., Pollack, J. M., & Lai, L. (2016). A multilevel perspective of interpersonal trust: Individual, dyadic, and cross-level predictors of performance. *Journal of Organizational Behavior*, *37*(8), 1271–1292. https://doi.org/10.1002/job.2104

Halbesleben, J. R., & Wheeler, A. R. (2015). To invest or not? The role of coworker support and trust in daily reciprocal gain spirals of helping behavior. *Journal of Management*, *41*(6), 1628–1650. https://doi.org/10.1177/0149206312455246

Hambrick, D.C. (2007). Upper echelons theory: An update. *Academy of Management Review, 32(*2), 334–343. https://doi.org/10.5465/amr.2007.24345254

Hambrick, D. C., Finkelstein, S., Cho, T. S., & Jackson, E. M. (2004). Isomorphism in reverse: Institutional theory as an explanation for recent increases in intra industry heterogeneity and managerial discretion. *Research in Organizational Behavior*, *26*, 307–350. https://doi.org/10.1016/S0191-3085(04)26008-7

Hambrick, D. C., Humphrey, S. E., & Gupta, A. (2015). Structural interdependence within top management teams: A key moderator of upper echelons predictions. *Strategic Management Journal*, *36*(3), 449–461. https://doi.org/10.1002/smj.2230

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2), 193–206. https://doi.org/10.2307/258434

Harms, P. D. (2011). Adult attachment styles in the workplace. *Human Resource Management Review, 21*(4), 285–296. https://doi.org/10.1016/j.hrmr.2010.10.006

Haselhuhn, M. P., Kennedy, J. A., Kray, L. J., Van Zant, A. B., & Schweitzer, M. E. (2015). Gender differences in trust dynamics: Women trust more than men following a trust violation. *Journal of Experimental Social Psychology*, *56*, 104–109. http://doi.org/10.1016/j.jesp.2014.09.007

Heaphy, E. D., Byron, K., Ballinger, G. A., Gittell, J. H., Leana, C., & Sluss, D. M. (2018). Introduction to special topic forum: The changing nature of work relationships. *Academy of Management Review*, *43*(4), 558–569. https://doi.org/10.5465/amr.2018.0222

Heggestad, E. D., Scheaf, D. J., Banks, G. C., Monroe Hausfeld, M., Tonidandel, S., & Williams, E. B. (2019). Scale adaptation in organizational science research: A review and best-practice recommendations. *Journal of Management*, *45*(6), 2596–2627. https://doi.org/10.1177/0149206319850280

Hempel, C. (1966). *Philosophy of natural science*. Prentice-Hall.

Hill, N. S., Bartol, K. M., Tesluk, P. E., & Langa, G. A. (2009). Organizational context and face-to-face interaction: Influences on the development of trust and collaborative behaviors in computer-mediated groups. *Organizational Behavior and Human Decision Processes*, *108*(2), 187–201. https://doi.org/10.1016/j.obhdp.2008.10.002

Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, *21*(5), 967–988. https://doi.org/10.1177/014920639502100509

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organisational Research Methods, 1*(1), 104–121. https://doi.org/10.1177%2F109442819800100106

Högberg, L., Sköld, B., & Tillmar, M. (2018). Contextualising the coevolution of (dis)trust and control – a longitudinal case study of a public market. *Journal of Trust Research*, *8*(2), 192–219. https://doi.org/10.1080/21515581.2018.1504299

Holmes, J. G. (2002). Interpersonal expectations as the building blocks of social cognition: An interdependence theory perspective. *Personal Relationships*, *9*(1), 1–26. https://doi.org/10.1111/1475-6811.00001

Holtom, B., Baruch, Y., Aguinis, H., & A Ballinger, G. (2022). Survey response rates: Trends and a validity assessment framework. *Human Relations*, *75*(8), 1560–1584. https://doi.org/10.1177/00187267211070769

Holtz, B. C. (2015). From first impression to fairness perception: Investigating the impact of initial trustworthiness beliefs. *Personnel Psychology*, *68*(3), 499–546. https://doi.org/10.1111/peps.12092

Holtz, B. C., De Cremer, D., Hu, B., Kim, J., & Giacalone, R. A. (2020). How certain can we really be that our boss is trustworthy, and does it matter? A metacognitive perspective on employee evaluations of supervisor trustworthiness. *Journal of Organizational Behavior, 41*(7), 587–605. https://doi.org/10.1002/job.2447

Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology, 63(6),* 597–606. https://doi.org/10.1086/222355

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Huff, L., & Kelley, L. (2003). Levels of organizational trust in individualist versus collectivist societies: A seven-nation study. *Organization Science*, *14*(1), 81–90. https://doi.org/10.1287/orsc.14.1.81.12807

Hülsheger, U. R., Anderson, N., & Salgado, J. F. (2009). Team-level predictors of innovation at work: a comprehensive meta-analysis spanning three decades of research. *Journal of Applied Psychology*, *94*(5), 1128–1145. https://doi.org/10.1037/a0015978

Humphrey, S. E., & Aime, F. (2014). Team microdynamics: Toward an organizing approach to teamwork. *Academy of Management Annals*, *8*(1), 443–503. https://doi.org/10.5465/19416520.2014.904140

Hurley, A. E., Scandura, T. A., Schriesheim, C. A., Brannick, M. T., Seers, A., Vandenberg, R. J., & Williams, L. J. (1997). Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives. *Journal of Organizational Behavior*, *18*(6), 667–683. https://doi.org/10.1002/(SICI)1099-1379(199711)18:6%3C667::AID-JOB874%3E3.0.CO;2-T

Iida, M., Savord, A., & Ledermann, T. (2023). Dyadic longitudinal models: A critical review. *Personal Relationships, 30*(2), 356–378. https://doi.org/10.1111/pere.12468

Iida, M., Seidman, G., & Shrout, P. E. (2018). Models of interdependent individuals versus dyadic processes in relationship research. *Journal of Social and Personal Relationships*, *35*(1), 59–88. https://doi.org/10.1177/0265407517725407

Ilies, R., Nahrgang, J. D., & Morgeson, F. P. (2007). Leader-member exchange and citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, *92*(1), 269–277. https://doi.org/10.1037/0021-9010.92.1.269

Ingram, P., & Zou, X. (2008). Business friendships. *Research in Organizational Behavior*, *28*, 167–184. https://doi.org/10.1016/j.riob.2008.04.006

Isaeva, N., Bachmann, R., Bristow, A., & Saunders, M.N.K. (2015). Why the epistemologies of trust researchers matter. *Journal of Trust Research*, 5(2), 153–169. https://doi.org/10.1080/21515581.2015.1074585

Jackson, D. L., Gillaspy, J. A., Jr., & Purc-Stephenson, R. (2009). Reporting practices in confirmatory factor analysis: an overview and some recommendations. *Psychological Methods*, *14*(1), 6–23. https://doi.org/10.1037/a0014694

Jarvenpaa, S. L., Knoll, K., & Leidner, D. E. (1998). Is anybody out there? Antecedents of trust in global virtual teams. *Journal of Management Information Systems*, *14*(4), 29–64. https://doi.org/10.1080/07421222.1998.11518185

Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of Management Review*, *31*(2), 386–408. https://doi.org/10.5465/amr.2006.20208687

Johns, G. (2017). Reflections on the 2016 decade award: Incorporating context in organizational research. *Academy of Management Review*, *42*(4), 577–595. https://doi.org/10.5465/amr.2017.0044

Johns, G. (2018). Advances in the treatment of context in organizational research. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*, 21–46. https://doi.org/10.1146/annurev-orgpsych-032117-104406

Jones, G. R., & George, J. M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. *Academy of Management Review*, *23*(3), 531–546. https://doi.org/10.2307/259293

Jones, S. L., & Shah, P. P. (2016). Diagnosing the locus of trust: A temporal perspective for trustor, trustee, and dyadic influences on perceived trustworthiness. *Journal of Applied Psychology, 101*(3), 392–414. https://doi.org/10.1037/apl0000041

Jones, S., & Shah, P. (2021). The tangled ties of trust: A social network perspective on interpersonal trust. In N. Gillespie, C. A. Fulmer, & R. J. Lewicki (Eds.), *Understanding trust in organizations: A multilevel perspective* (pp. 205–232). Routledge. https://doi.org/10.4324/9780429449185

Kacmar, K. M., Bachrach, D. G., Harris, K. J., & Noble, D. (2012). Exploring the role of supervisor trust in the associations between multiple sources of relationship conflict and organizational citizenship behavior. *Leadership Quarterly*, *23*(1), 43–54. https://doi.org/10.1016/j.leaqua.2011.11.004

Kaltiainen, J., Lipponen, J., & Holtz, B. C. (2017). Dynamic interplay between merger process justice and cognitive trust in top management: A longitudinal study. *Journal of Applied Psychology*, *102*(4), 636–67. http://ddoi.org/10.1037/apl0000180

Karhapää, S.-J., & Savolainen, T. (2018). Trust development processes in intra-organisational relationships – a multi-level permeation of trust in a merging university. *Journal of Trust Research, 8*(2), 166–191. https://doi.org/10.1080/21515581.2018.1509009

Kashy, D. A., Donnellan, M. B., Burt, S. A., & McGue, M. (2008). Growth curve models for indistinguishable dyads using multilevel modeling and structural equation modeling: The case of adolescent twins' conflict with their mothers. *Developmental Psychology*, *44*(2), 316–329. https://doi.org/10.1037/0012-1649.44.2.316

Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., McClintock, E., Peplau, L. A., & Peterson, D. (1983). Analyzing close relationships. In H.H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplau, & D. Peterson (Eds.), *Close relationships: Development and change* (pp. 20–67). Freeman.

Kelley, H. H., Holmes, J. G., Kerr, N. L., Reis, H. T., Rusbult, C. E., & Van Lange, P. A. (2003). *An atlas of interpersonal situations*. Cambridge University Press. https://doi.org/10.1017/CBO9780511499845

Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence*. Wiley.

Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships, 13*(2), 279–294. https://doi.org/10.1177/0265407596132007

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. Guilford Press. https://doi.org/10.1177/1098214007300894

Kim, H., & Kim, J. S. (2022). Extending the actor-partner interdependence model to accommodate multivariate dyadic data using latent variables. *Psychological Methods*. Advance online publication. https://doi.org/10.1037/met0000531

Kim, T. Y., Wang, J., & Chen, J. (2018). Mutual trust between leader and subordinate and employee outcomes. *Journal of Business Ethics*, *149*(4), 945–958. https://doi.org/10.1007/s10551-016-3093-y

Kim, J., Yammarino, F. J., Dionne, S. D., Eckardt, R., Cheong, M., Tsai, C. Y., J. Guo, J. Won. & Park., J.W. (2020). State-of-the-science review of leader-follower dyads research. *Leadership Quarterly*, *31*(1), 101306. https://doi.org/10.1016/j.leaqua.2019.101306

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

Klotz, A. C., da Motta Veiga, S. P., Buckley, M. R., & Gavin, M. B. (2013). The role of trustworthiness in recruitment and selection: A review and guide for future research. *Journal of Organizational Behavior*, *34*, S104–S119. https://doi.org/10.1002/job.1891

Klotz, A. C., Hmieleski, K. M., Bradley, B. H., & Busenitz, L. W. (2014). New venture teams: A review of the literature and roadmap for future research. *Journal of Management*, *40*(1), 226–255. https://doi.org/10.1177/0149206313493325

Knoll, D. L., & Gill, H. (2011). Antecedents of trust in supervisors, subordinates, and peers. *Journal of Managerial Psychology*, *26*(4), 313–330. http://doi.org/10.1108/02683941111124845

Ko, D. G. (2014). The mediating role of knowledge transfer and the effects of client-consultant mutual trust on the performance of enterprise implementation projects. *Information & Management*, *51*(5), 541–550. https://doi.org/10.1016/j.im.2014.04.001

Kong, D. T. (2018). Trust toward a group of strangers as a function of stereotype-based social identification. *Personality and Individual Differences*, *120*, 265–270. https://doi.org/10.1016/j.paid.2017.03.031

Kong, D. T., Dirks, K. T., & Ferrin, D. L. (2014). Interpersonal trust within negotiations: Meta-analytic evidence, critical contingencies, and directions for future research. *Academy of Management Journal*, *57*(5), 1235–1255. https://doi.org/10.5465/amj.2012.0461

Konovsky, M. A., & Pugh, S. D. (1994). Citizenship behavior and social exchange. *Academy of Management Journal*, *37*(3), 656–669. https://doi.org/10.5465/256704

Koopman, J., Lanaj, K., & Scott, B. A. (2016). Integrating the bright and dark sides of OCB: A daily investigation of the benefits and costs of helping others. *Academy of Management Journal*, *59*(2), 414–435. https://doi.org/10.5465/amj.2014.0262

Korsgaard, M. A. (2018). Reciprocal trust: A self-reinforcing dynamic process. In R. H. Searle, A. I. Nienaber, & S. B. Sitkin (Eds.), *The Routledge companion to trust* (pp. 163–182). Routledge. https://doi.org/10.4324/9781315745572

Korsgaard, A., & Bliese, P. (2021). Divergence in collective trust. In N. Gillespie, C. A. Fulmer, & R. J. Lewicki (Eds.), *Understanding trust in organizations: A multilevel perspective* (pp. 45–65). Routledge. https://doi.org/10.4324/9780429449185

Korsgaard, M. A., Brodt, S. E., & Whitener, E. M. (2002). Trust in the face of conflict: The role of managerial trustworthy behavior and organizational context. *Journal of Applied Psychology*, *87*(2), 312–319. https://doi.org/10.1037//0021-9010.87.2.312

Korsgaard, M. A., Brower, H. H., & Lester, S. W. (2015). It isn't always mutual: A critical review of dyadic trust. *Journal of Management, 41*(1), 47–70. https://doi.org/10.1177/0149206314547521

Korsgaard, M. A., Kautz, J., Bliese, P., Samson, K., & Kostyszyn, P. (2018). Conceptualising time as a level of analysis: New directions in the analysis of trust dynamics. *Journal of Trust Research, 8*(2), 142–165. https://doi.org/10.1080/21515581.2018.1516557

Kozlowski, S. W., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest*, *7*(3), 77–124. https://doi.org/10.1111/j.1529-1006.2006.00030.x

Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions*, (pp. 3–90.) Jossey-Bass.

Kramer, R. M., & Lewicki, R. J. (2010). Repairing and enhancing trust: Approaches to reducing organizational trust deficits. *Academy of Management Annals*, *4*(1), 245–277. http://doi.org/10.1080/19416520.2010.487403

Kramer R. M,, & Tyler T. R. (Eds.). (1996). *Trust in organizations: Frontiers of theory and research.* Sage Publications.

Krasikova, D. V., & LeBreton, J. M. (2012). Just the two of us: Misalignment of theory and methods in examining dyadic phenomena. *Journal of Applied Psychology*, *97*(4), 739–757. https://doi.org/10.1037/a0027962

Krasikova, D. V., & LeBreton, J. M. (2019). Multilevel measurement: Agreement, reliability, and nonindependence. In S. Humphrey & J. LeBreton (Eds.), *The handbook of multilevel theory, measurement, and analysis* (pp. 279–304). American Psychological Association.

Krause, R., Roh, J., & Whitler, K. A. (2022). The top management team: Conceptualization, operationalization, and a roadmap for scholarship. *Journal of Management*, *48*(6), 1548–1601. https://doi.org/10.1177/01492063211072459

Kulik, C. T. (2011). Climbing the higher mountain: The challenges of multilevel, multisource, and longitudinal research designs. *Management and Organization Review*, *7*(3), 447–460. https://doi.org/10.1111/j.1740-8784.2011.00226.x

Kung, F. Y., Chao, M. M., Yao, D. J., Adair, W. L., Fu, J. H., & Tasa, K. (2018). Bridging racial divides: Social constructionist (vs. essentialist) beliefs facilitate trust in intergroup contexts. *Journal of Experimental Social Psychology*, *74*, 121–134. http://doi.org/10.1016/j.jesp.2017.09.008

Kurtessis, J. N., Eisenberger, R., Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S. (2017). Perceived organizational support: A meta-analytic evaluation of organizational support theory. *Journal of Management*, *43*(6), 1854–1884. https://doi.org/10.1177/0149206315575554

Langenkamp, A. (2022). The influence of loneliness on perceived connectedness and trust beliefs– longitudinal evidence from the Netherlands. *Journal of Social and Personal Relationships*, Advance online publication. https://doi.org/10.1177/02654075221144716

Lam, L. W., Loi, R., & Leong, C. (2013). Reliance and disclosure: How supervisory justice affects trust in supervisor and extra-role performance. *Asia Pacific Journal of Management*, *30*(1), 231–249. https://doi.org/10.1007/s10490-011-9249-5

Lanaj, K., & Jennings, R. E. (2020). Putting leaders in a bad mood: The affective costs of helping followers with personal problems. *Journal of Applied Psychology, 105*(4), 355–371. https://doi.org/10.1037/ apl0000450

Lanaj, K., Johnson, R. E., & Wang, M. (2016). When lending a hand depletes the will: The daily costs and benefits of helping. *Journal of Applied Psychology, 101*(8), 1097–1110. https://doi.org/10.1037/ apl0000118

Lance, C. E. & Vandenberg, R. J. (2009). *Statistical and methodological myths and urban legends.* Routledge. https://doi.org/10.4324/9780203867266

Lance, C. E. & Vandenberg, R. J. (2015). *More statistical and methodological myths and urban legends.* https://doi.org/10.4324/9780203775851

Landis, R. S., & Cortina, J. M. (2015). Is ours a hard science (and do we care)?. In C. E. Lance & R. J. Vandenberg (Eds.), *More statistical and methodological myths and urban legends* (pp. 19–45). Routledge.

Landis, R. S., Edwards, B. D., & Cortina, J. M. (2009). On the practice of allowing correlated residuals among indicators in structural equation models. In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends,* (pp. 193–212). Routledge.

Langfred, C. W. (2004). Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal*, *47*(3), 385–399. http://doi.org/10.2307/20159588

Lapidot, Y., Kark, R., & Shamir, B. (2007). The impact of situational vulnerability on the development and erosion of followers' trust in their leader. *Leadership Quarterly*, *18*(1), 16–34. https://doi.org/10.1016/j.leaqua.2006.11.004

Lau, D. C., Lam, L. W., & Salamon, S. D. (2008). The impact of relational demographics on perceived managerial trustworthiness: Similarity or norms?. *The Journal of Social Psychology*, *148*(2), 187–209. https://doi.org/10.3200/SOCP.148.2.187-209

Lau, D. C., Lam, L. W., & Wen, S. S. (2014). Examining the effects of feeling trusted by supervisors in the workplace: A self-evaluative perspective. *Journal of Organizational Behavior, 35*(1), 112–127. https://doi.org/10.1002/job.1861

Lau, D. C., & Liden, R. C. (2008). Antecedents of coworker trust: Leaders' blessings. *Journal of Applied Psychology*, *93*(5), 1130–1138. https://doi.org/10.1037/0021-9010.93.5.1130

Laurenceau, J. P., Barrett, L. F., & Pietromonaco, P. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, *74*(5), 1238–1251. https://doi.org/10.1037/0022-3514.74.5.1238

Lawler, E. J. (2001). An affect theory of social exchange. *American Journal of Sociology*, *107*(2), 321–352. https://doi.org/10.1086/324071

Lawler, E. J., & Thye, S. R. (1999). Bringing emotions into social exchange theory. *Annual Review of Sociology*, *25*(1), 217–244. https://doi.org/10.1146/annurev.soc.25.1.217

Le, B., & Agnew, C. R. (2003). Commitment and its theorized determinants: A meta–analysis of the Investment Model. *Personal Relationships*, *10*(1), 37–57. https://doi.org/10.1111/1475-6811.00035

LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods, 11*(4), 815– 852. https://doi.org/10.1177/1094428106296642

Ledermann, T., & Kenny, D. A. (2015). A toolbox with programs to restructure and describe dyadic data. *Journal of Social and Personal Relationships*, *32*(8), 997–1011. https://doi.org/10.1177/0265407514555273

Ledermann, T., & Kenny, D. A. (2017). Analyzing dyadic data with multilevel modeling versus structural equation modeling: A tale of two methods. *Journal of Family Psychology*, *31*(4), 442–452. https://doi.org/10.1037/fam0000290

Lee, J. I., Dirks, K. T., & Campagna, R. L. (2023). At the heart of trust: Understanding the integral relationship between emotion and trust. *Group & Organization Management*, *48*(2), 546–580. https://doi.org/10.1177/10596011221118499

Lee, P., Gillespie, N., Mann, L., & Wearing, A. (2010). Leadership and trust: Their effect on knowledge sharing and team performance. *Management Learning, 41(4),* 473–491. https://doi:10.1177/1350507610362036

Legood, A., van der Werff, L., Lee, A., & Den Hartog, D. (2020). A meta-analysis of the role of trust in the leadership-performance relationship. *European Journal of Work and Organizational Psychology*, 1–22. https://doi.org/10.1080/1359432X.2020.1819241

Legood, A., van der Werff, L., Lee, A., den Hartog, D., & van Knippenberg, D. (2023). A critical review of the conceptualization, operationalization, and empirical literature on cognition-based and affect-based trust. *Journal of Management Studies, 60*(2), 495–537. https://doi.org/10.1111/joms.12811

LePine, J. A., Piccolo, R. F., Jackson, C. L., Mathieu, J. E., & Saul, J. R. (2008). A meta-analysis of teamwork processes: tests of a multidimensional model and relationships with team effectiveness criteria. *Personnel Psychology*, *61*(2), 273–307. https://doi.org/10.1111/j.1744-6570.2008.00114.x

Lester, S. W., & Brower, H. H. (2003). In the eyes of the beholder: The relationship between subordinates' felt trustworthiness and their work attitudes and behaviors. *Journal of*

Leadership & Organizational Studies, *10*(2), 17–33.
https://doi.org/10.1177/107179190301000203

Lester, S. W., Meglino, B. M., & Korsgaard, M. A. (2008). The role of other orientation in organizational citizenship behavior. *Journal of Organizational Behavior*, *29*(6), 829– https://doi.org/841. 10.1002/job.504

Levin, D. Z., Whitener, E. M., & Cross, R. (2006). Perceived trustworthiness of knowledge sources: The moderating impact of relationship length. *Journal of Applied Psychology*, *91*(5), 1163 –1171. http://doi.org/10.1037/0021-9010.91.5.1163

Levine, E. E., Bitterly, T. B., Cohen, T. R., & Schweitzer, M. E. (2018). Who is trustworthy? Predicting trustworthy intentions and behavior. *Journal of Personality and Social Psychology*, *115*(3), 468–494. http://doi.org/10.1037/pspi0000136

Levine, E. E., & Schweitzer, M. E. (2014). Are liars ethical? On the tension between benevolence and honesty. *Journal of Experimental Social Psychology*, *53*, 107–117. https://doi.org/10.1016/j.jesp.2014.03.005

Levine, E. E., & Schweitzer, M. E. (2015). Prosocial lies: When deception breeds trust. *Organizational Behavior and Human Decision Processes*, *126*, 88–106. https://doi.org/10.1016/j.obhdp.2014.10.007

Levine, E. E., & Wald, K. A. (2020). Fibbing about your feelings: How feigning happiness in the face of personal hardship affects trust. *Organizational Behavior and Human Decision Processes*, *156*, 135–154. https://doi.org/10.1016/j.obhdp.2019.05.004

Lewicki, R. J. and Brinsfield, C. (2011). Framing trust: Trust as a heuristic. In W. A. Donohue, R. R Rogan. & S. Kaufman, (Eds), *Framing matters: Perspectives on negotiation research and practice in communication*. Peter Lang, 110–35.

Lewicki, R. J., & Brinsfield, C. (2012). Trust research: Measures of trusting beliefs and behaviors. In F. Lyon, G. Möllering, & M. Saunders (Eds.), *Handbook of research methods on trust* (pp. 29–39). Edward Elgar. https://doi.org/10.4337/9781782547419.00013

Lewicki, R. J., & Brinsfield, C. (2017). Trust repair. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 287–313. https://doi.org/10.1146/annurev-orgpsych-032516-113147

Lewicki, R. J., & Bunker, B. B. (1996). Developing and maintaining trust in work relationships. In R. Kramer & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 114–139). Sage Publications. https://doi.org/10.4135/9781452243610.n7

Lewicki, R. J., Tomlinson, E. C., & Gillespie, N. (2006). Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions. *Journal of Management, 32*(6), 991–1022. https://doi.org/10.1177/0149206306294405

Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. *Social Forces, 63*(4), 967–985. https://doi.org/10.2307/2578601

Lewin K. (1936). *Principles of topological psychology.* McGraw-Hill. https://doi.org/10.1037/10019-000

Lewin, K. (1948). *Resolving social conflicts; selected papers on group dynamics.* Harper. https://doi.org/10.2307/2572316

Li, P. P. (2011). The rigour–relevance balance for engaged scholarship: New frame and new agenda for trust research and beyond. *Journal of Trust Research*, *1*(1), 1–21. https://doi.org/10.1080/21515581.2011.550718

Li, P. P. (2012). When trust matters the most: The imperatives for contextualising trust research. *Journal of Trust Research, 2*(2), 101–116. https://doi.org/10.1080/21515581.2012.708494

Li, P. P. (2013). Entrepreneurship as a new context for trust research. *Journal of Trust Research, 3*(1), 1–10. https://doi.org/10.1080/21515581.2013.771500

Liden, R. C., Anand, S., & Vidyarthi, P. (2016). Dyadic relationships. *Annual Review of Organizational Psychology and Organizational Behavior*, *3*(1), 139–166. https://doi.org/10.1146/annurev-orgpsych-041015-062452

Lin, H. C., & Rababah, N. (2014). CEO–TMT exchange, TMT personality composition, and decision quality: The mediating role of TMT psychological empowerment. *Leadership Quarterly*, *25*(5), 943–957. https://doi.org/10.1016/j.leaqua.2014.06.005

Lin, K. J., Savani, K., & Ilies, R. (2019). Doing good, feeling good? The roles of helping motivation and citizenship pressure. *Journal of Applied Psychology, 104*(8), 1020–1035. https://doi.org/10.1037/apl0000392

Ling, Y. A. N., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). Transformational leadership's role in promoting corporate entrepreneurship: Examining the CEO-TMT interface. *Academy of Management Journal*, *51*(3), 557–576. https://doi.org/10.5465/amj.2008.32626023

Lipponen, J., Kaltiainen, J., van der Werff, L., & Steffens, N. K. (2020). Merger-specific trust cues in the development of trust in new supervisors during an organizational merger: A naturally occurring quasi-experiment. *Leadership Quarterly*, *31*(4), 101365. https://doi.org/10.1016/j.leaqua.2019.101365

Loignon, A. C., Gooty, J., Rogelberg, S. G., & Lucianetti, L. (2019). Disagreement in leader–follower dyadic exchanges: Shared relationship satisfaction and investment as antecedents. *Journal of Occupational and Organizational Psychology*, *92*(3), 618–644. https://doi.org/10.1111/joop.12270

Lord, R. G., Brown, D. J., & Freiberg, S. J. (1999). Understanding the dynamics of leadership: The role of follower self-concepts in the leader/ follower relationship. *Organizational Behavior and Human Decision Process, 78*(3), 167–203. https://doi.org/10.1006/obhd.1999.2832

Lount Jr, R. B., & Pettit, N. C. (2012). The social context of trust: The role of status. *Organizational Behavior and Human Decision Processes*, *117*(1), 15–23. https://doi.org/10.1016/j.obhdp.2011.07.005

Lu, S. C., Kong, D. T., Ferrin, D. L., & Dirks, K. T. (2017). What are the determinants of interpersonal trust in dyadic negotiations? Meta-analytic evidence and implications for future research. *Journal of Trust Research*, *7*(1), 22–50. https://doi.org/10.1080/21515581.2017.1285241

Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. (2006). Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration. *Journal of Management*, *32*(5), 646–672. http://doi.org/10.1177/0149206306290712

Luce R.D., & Raiffa, H. (1957). *Games and decisions: Introduction and critical survey.* Wiley.

Lyon, F., Möllering, G., & Saunders, M. N. (2015). Introduction. Researching trust: the ongoing challenge of matching objectives and methods. In F. Lyon, G. Möllering, & M. Saunders Eds.), In *Handbook of research methods on trust* (2nd ed., pp. 1–22). Edward Elgar.

Lyons, B. J., & Scott, B. A. (2012). Integrating social exchange and affective explanations for the receipt of help and harm: A social network approach. *Organizational Behavior and Human Decision Processes*, *117*(1), 66–79. https://doi.org/10.1016/j.obhdp.2011.10.002

Madlock, P. E., & Dillow, M. R. (2012). The consequences of verbal aggression in the workplace: An application of the investment model. *Communication Studies, 63*(5), 593–607. https://doi.org/10.1080/10510974.2011.642456

Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling*, *11*(3), 320– 341. https://doi.org/10.1207/s15328007sem1103_2

Martin, R., Epitropaki, O., Erdogan, B., & Thomas, G. (2019). Relationship based leadership: current trends and future prospects. *Journal of Occupational and Organizational Psychology.*, *92*(3), 465–474. https://doi.org/10.1111/joop.12286

Martin, R., Hughes, D. J., Epitropaki, O., & Thomas, G. (2021). In pursuit of causality in leadership training research: A review and pragmatic recommendations. *Leadership Quarterly*, *32*(5), 101375. https://doi.org/10.1016/j.leaqua.2019.101375

Martínez-Tur, V., Molina, A., Moliner, C., Gracia, E., Andreu, L., Bigne, E., & Luque, O. (2020). Reciprocity of trust between managers and team members. *Personnel Review*, *49*(2), 653–669. https://doi.org/10.1108/PR-08-2018-0319

Mathieu, J. E., Gallagher, P. T., Domingo, M. A., & Klock, E. A. (2019). Embracing complexity: Reviewing the past decade of team effectiveness research. *Annual Review of Organizational Psychology and Organizational Behavior*, *6*(1), 17–46. https://doi.org/10.1146/annurev-orgpsych-012218-015106

Mathieu, J. E., Hollenbeck, J. R., van Knippenberg, D., & Ilgen, D. R. (2017). A century of work teams in the Journal of Applied Psychology. *Journal of Applied Psychology*, *102*(3), 452–467. https://doi.org/10.1037/apl0000128

Maxwell, A. L., & Lévesque, M. (2014). Trustworthiness: A critical ingredient for entrepreneurs seeking investors. *Entrepreneurship Theory and Practice*, *38*(5), 1057–1080. http://doi.org/10.1111/j.1540-6520.2011.00475.x

Mayer, R. C., Bobko, P., Davis, J. H., & Gavin, M. B. (2011). The effects of changing power and influence tactics on trust in the supervisor: A longitudinal field study. *Journal of Trust Research*, *1*(2), 177-201. http://doi.org/10.1080/21515581.2011.603512

Mayer, R.C., & Davis, J.H. (1999). The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology, 84*, pp. 123–136. https://doi.org/10.1037/0021-9010.84.1.123

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, *20*(3), 709–734. https://doi.org/10.5465/amr.1995.9508080335

Mayer, R. C., & Gavin, M. B. (2005). Trust in management and performance: Who minds the shop while the employees watch the boss?. *Academy of Management Journal*, *48*(5), 874–888. https://doi.org/10.5465/amj.2005.18803928

McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, *38*(1), 24–59. https://doi.org/10.5465/256727

McClean, E. J., Kim, S., & Martinez, T. (2022). Which ideas for change are endorsed? How agentic and communal voice affects endorsement differently for men and for Women. *Academy of Management Journal*, *65*(2), 634–655. https://doi.org/10.5465/amj.2019.0492

McEvily, B. (2011). Reorganizing the boundaries of trust: From discrete alternatives to hybrid forms. *Organization science*, *22*(5), 1266–1276. http://doi.org/10.1287/orsc.1110.0649

McEvily, B., & Tortoriello, M. (2011). Measuring trust in organisational research: Review and recommendations. *Journal of Trust Research*, *1*(1), 23–63. https://doi.org/10.1080/21515581.2011.552424

McEvily, B., Zaheer, A., & Kamal, D. K. F. (2017). Mutual and exclusive: Dyadic sources of trust in interorganizational exchange. *Organization Science*, *28*(1), 74–92. https://doi.org/10.1287/orsc.2016.1102

McEvily, B., Zaheer, A., & Soda, G. (2021). Network trust. In N. Gillespie, C. A. Fulmer, & R. J. Lewicki (Eds.), *Understanding trust in organizations: A multilevel perspective* (pp. 179–204). Routledge. https://doi.org/10.4324/9780429449185

McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, *23*(3), 473–490. https://doi.org/10.2307/259290

Menz, M. (2012). Functional top management team members: A review, synthesis, and research agenda. *Journal of Management*, *38*(1), 45–80. https://doi.org/10.1177/0149206311421830

Meredith, W., & Tisak, J. (1990). Latent curve analysis. *Psychometrika, 55*(1), 107–122. https://doi.org/10.1007/BF02294746

Merrian-Webster. (n.d.). Reciprocate. In *Merriam-Webster dictionary*. Retrieved June 3, 2023, from https://www.merriam-webster.com/dictionary/reciprocate

Methot, J. R., & Cole, M. S. (2021). Unpacking the microdynamics of multiplex peer developmental relationships: A mutuality perspective. *Journal of Management*, *49*(2), 606–639. https://doi.org/10.1177/01492063211048437

Methot, J.R., Melwani, S., & Rothman, N. B. (2017). The space between us: A social-functional emotions view of ambivalent and indifferent workplace relationships. *Journal of Management 43*(6), 1789–1819. https://doi.org/10.1177/0149206316685853

Methot, J. R., Lepine, J. A., Podsakoff, N. P., & Christian, J. S. (2016). Are workplace friendships a mixed blessing? Exploring tradeoffs of multiplex relationships and their associations with job performance. *Personnel Psychology*, *69*(2), 311–355. https://doi.org/10.1111/peps.12109

Meyerson, D., Weick, K.E. & Kramer, R.M. (1996) Swift trust and temporary groups. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research*. Sage, pp. 166–195. https://doi.org/10.4135/9781452243610.n9

Miller, C. D., Richard, O. C., & Ford, Jr, D. L. (2019). Ethno-racial similarity, relationship conflict and trust in supervisor-subordinate dyads. *International Journal of Conflict Management*, *30*(2), 246–269. https://doi.org/10.1108/IJCMA-01-2018-0014

Misztal, B. A. (2011). *The challenges of vulnerability: In search of strategies for a less vulnerable social life*. Palgrave Macmillan.

Mitchell, T. R., & James, L. R. (2001). Building better theory: Time and the specification of when things happen. *Academy of Management Review*, *26*(4), 530–547. http://doi.org/10.2307/3560240

Möllering, G. (2001). The nature of trust: From Georg Simmel to a theory of expectation, interpretation and suspension. *Sociology, 35*, 403–420. http://doi.org/10.1017/S0038038501000190

Möllering, G. (2019). Putting a spotlight on the trustor in trust research. *Journal of Trust Research*, *9*(2), 131–135. https://doi.org/10.1080/21515581.2019.1678853

Möllering, G., Bachmann, R., & Lee, S. H. (2004). Introduction: Understanding organizational trust–foundations, constellations, and issues of operationalisation. *Journal of Managerial Psychology*, *19*(6) 556–570. https://doi.org/10.1108/02683940410551480

Mooijman, M. (2023). Power Dynamics and the Reciprocation of Trust and Distrust. *Journal of Personality and Social Psychology*. Advance online publication. https://doi.org/10.1037/pspi0000424

Mooijman, M., van Dijk, W. W., van Dijk, E., & Ellemers, N. (2019). Leader power, power stability, and interpersonal trust. *Organizational Behavior and Human Decision Processes*, *152*, 1–10. https://doi.org/10.1016/j.obhdp.2019.03.009

Mooradian, T., Renzl, B., & Matzler, K. (2006). Who trusts? Personality, trust and knowledge sharing. *Management Learning*, *37*(4), 523–540. https://doi.org/10.1177/1350507606073424

Moore, A. K., Munguia Gomez, D. M., & Levine, E. E. (2019). Everyday dilemmas: New directions on the judgment and resolution of benevolence–integrity dilemmas. *Social and Personality Psychology Compass*, *13*(7), e12472. https://doi.org/10.1111/spc3.12472

Moorman, R. H., Blakely, G. L., & Darnold, T. C. (2018). Understanding how perceived leader integrity affects follower trust: Lessons from the use of multidimensional measures of integrity and trust. *Journal of Leadership & Organizational Studies*, *25*(3), 277–289. http://doi.org/10.1177/1548051817750544

Mossholder, K. W., Richardson, H. A., & Settoon, R. P. (2011). Human resource systems and helping in organizations: A relational perspective. *Academy of Management Review*, *36*(1), 33–52. http://doi.org/10.5465/amr.2009.0402

Murray, S. L., & Holmes, J. G. (2009) The architecture of interdependent minds: A motivation-management theory of mutual responsiveness. *Psychological Review, 116*(4), 908–928. https://doi.org/10.1037/a0017015

Murray, S. L., Holmes, J. G., & Collins, N. L. (2006). Optimizing assurance: The risk regulation system in relationships. *Psychological Bulletin, 132*(5), 641–666. https://doi.org/10.1037/0033-2909.132.5.641

Muthén, L. K., & Muthén, B. O. (2002). How to use a Monte Carlo study to decide on sample size and determine power. *Structural Equation Modeling*, *9*(4), 599–620. https://doi.org/10.1207/S15328007SEM0904_8

Naber, A. M., Payne, S. C., & Webber, S. S. (2018). The relative influence of trustor and trustee individual differences on peer assessments of trust. *Personality and Individual Differences*, *128*, 62–68. https://doi.org/10.1016/j.paid.2018.02.022

Neely Jr, B. H., Lovelace, J. B., Cowen, A. P., & Hiller, N. J. (2020). Metacritiques of upper echelons theory: Verdicts and recommendations for future research. *Journal of Management*, *46*(6), 1029–1062. https://doi.org/10.1177/0149206320908640

Newman, D. A. (2014). Missing data: Five practical guidelines. *Organizational Research Methods*, *17*(4), 372–411. https://doi.org/10.1177/1094428114548590

Nielsen, S. (2010). Top management team diversity: a review of theories and methodologies. *International Journal of Management Reviews, 12*(3), 301–316. https://doi.org/10.1111/j.1468-2370.2009.00263.x

Nienaber, A. M., Hofeditz, M., & Romeike, P. D. (2015a). Vulnerability and trust in leader-follower relationships. *Personnel Review, 44*(4), 567–591. https://doi.org/10.1108/PR-09-2013-0162

Nienaber, A. M., Holtgrave, M., Biron, M., Baumeister, V.M., Nayir, D.Z. & Schewe, G. (2022) Trickle-down effect of organizational trust on co-worker trust: The moderating role of cultural dissimilarity and relationship length. *European Management Review*, 1– 16. https://doi.org/10.1111/emre.12523

Nienaber, A. M., Romeike, P. D., Searle, R., & Schewe, G. (2015b). A qualitative meta-analysis of trust in supervisor-subordinate relationships. *Journal of Managerial Psychology*, *30*(5), 507–534. https://doi.org/10.1108/JMP-06-2013-0187

Nunnally, J. C. (1978). Psychometric theory (2nd ed.). McGraw-Hill.

OECD. (2023). *Organisation for Economic Co-operation and Development*. Retrieved June 3, 2023, from https://data.oecd.org/entrepreneur/enterprises-by-business-size.htm

Olekalns, M., Kulik, C. T., & Chew, L. (2014). Sweet little lies: Social context and the use of deception in negotiation. *Journal of Business Ethics*, *120*(1), 13–26. http://doi.org/10.1007/s10551-013-1645-y

Olsen, J. A., & Kenny, D. A. (2006). Structural equation modeling with interchangeable dyads. *Psychological Methods*, *11*(2), 127–141. https://doi.org/10.1037/1082-989X.11.2.127

Olson, B. J., Parayitam, S., & Bao, Y. (2007). Strategic decision making: The effects of cognitive diversity, conflict, and trust on decision outcomes. *Journal of Management*, *33*(2), 196–222. https://doi.org/10.1177/0149206306298657

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington Books.

Panda, S., Srivastava, S., & Pandey, S. C. (2020). Nature and evolution of trust in business-to-business settings: Insights from VC-entrepreneur relationships. *Industrial Marketing Management*, *91*, 246–256. https://doi.org/10.1016/j.indmarman.2020.09.011

Park, S., Grosser, T. J., Roebuck, A. A., & Mathieu, J. E. (2020). Understanding work teams from a network perspective: a review and future research directions. *Journal of Management*, *46*(6), 1002–1028. https://doi.org/10.1177%2F0149206320901573

Park, S., & Sturman, M. C. (2022). When perception is reality, there is more than one reality: The formation and effects of pay-for-performance perceptions. *Personnel Psychology*, *75*(3), 529–555. https://doi.org/10.1111/peps.12466

Parker, A., Ferrin, D., & Dirks, K. (2023). Brokering one's way to trust and success: Trust, helping, and network brokerage in organizations. In A. Gerbasi, C. Emery, & A. Parker (Eds.) *Understanding workplace relationships* (pp. 67–100). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-16640-2_3

Patent, V., & Searle, R. H. (2019). Qualitative meta-analysis of propensity to trust measurement. *Journal of Trust Research*, *9*(2), 136–163. https://doi.org/10.1080/21515581.2019.1675074

Pearce, C. L., & Manz, C. C. (2005). The new silver bullets of leadership: The importance of self- and shared leadership in knowledge work. *Organizational Dynamics, 34*(2), 130–140. https://doi.org/10.1016/j.orgdyn.2005.03.003

Peugh, J. L., DiLillo, D., & Panuzio, J. (2013). Analyzing mixed-dyadic data using structural equation models. *Structural Equation Modeling*, *20*(2), 314–337. https://doi.org/10.1080/10705511.2013.769395

Pillemer, J., & Rothbard, N. P. (2018). Friends without benefits: Understanding the dark sides of workplace friendship. *Academy of Management Review*, *43*(4), 635–660. https://doi.org/10.5465/amr.2016.0309

Pillutla, M. M., Malhotra, D., & Murnighan, J. K. (2003). Attributions of trust and the calculus of reciprocity. *Journal of Experimental Social Psychology*, *39*(5), 448–455. https://doi.org/10.1016/S0022-1031(03)00015-5

Ployhart, R. E., & Vandenberg, R. J. (2010). Longitudinal research: The theory, design, and analysis of change. *Journal of Management*, *36*(1), 94–120. https://doi.org/10.1177/0149206309352110

Ployhart, R. E., & Ward, A. K. (2011). The "quick start guide" for conducting and publishing longitudinal research. *Journal of Business and Psychology*, *26*(4), 413–422. https://doi.org/10.1007/s10869-011-9209-6

Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual-and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, *94*(1), 122–141. https://doi.org/10.1037/a0013079

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, *26*(3), 513–563. https://doi.org/10.1177/014920630002600307

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63,* 539–569. https://doi.org/10.1146/annurev-psych-120710-100452

Popper, K. R. (1963). *Conjectures and refutations: The growth of scientific knowledge.* Routledge.

Poppo, L., Zhou, K. Z., & Ryu, S. (2008). Alternative origins to interorganizational trust: An interdependence perspective on the shadow of the past and the shadow of the future. *Organization Science*, *19*(1), 39–55. https://doi.org/10.1287/orsc.1070.0281

Powell, T. (2020). Can quantitative research solve social problems? Pragmatism and the ethics of social research. *Journal of Business Ethics, 167*(1), 41–48. https://doi.org/10.1007/s1055 1-019-04196 -7

Priem, R. L., Lyon, D. W., & Dess, G. G. (1999). Inherent limitations of demographic proxies in top management team heterogeneity research. *Journal of Management*, *25*(6), 935–953. https://doi.org/10.1177/014920639902500607

Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review, 41*, 71–90. https://doi.org/10.1016/j.dr.2016.06.004

PytlikZillig, L.M., Kimbrough, C.D., Shockley, E., Neal, T.M., Herian, M.N., Hamm, J.A., Bornstein, B.H. &Tomkins, A.J. (2017). A longitudinal and experimental study of the impact of knowledge on the bases of institutional trust. *PLoS ONE*, *12*(4), e0175387. https://doi.org/10.1371/journal.pone.0175387

Qiu, J., Kesebir, S., Günaydin, G., Selçuk, E., & Wasti, S. A. (2022). Gender differences in interpersonal trust: Disclosure behavior, benevolence sensitivity and workplace implications. *Organizational Behavior and Human Decision Processes, 169,* 104119. https://doi.org/10.1016/j.obhdp.2022.104119

Radulovic, A. B., Thomas, G., Epitropaki, O., & Legood, A., (2019). Forgiveness in leader-member exchange relationships: mediating and moderating mechanisms. *Journal of Occupational and Organizational Psychology, 92*(3), 498–534. https://doi.org/10.1111/joop.12274

Ragins, B. R., & Dutton, J.E. (2007). Positive relationships at work: An introduction and invitation. In J .E. Dutton & B. R. Ragins (Eds.), *Exploring positive relationships at work: Building a theoretical and research foundation* (pp. 1–25). Lawrence Erlbaum. https://doi.org/10.4324/9781315094199

Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological Methodology*, *25*, 111–163. https://doi.org/10.2307/271063

Reis, H. T. (2007). Steps toward the ripening of relationship science. *Personal Relationships, 14*(1),1–23. https://doi.org/10.1111/j.1475-6811.2006.00139.x

Reis, H. T., & Arriaga, X. B. (2015). Interdependence theory. In B. Gawronski & G. Bodenhausen (Eds.), *Theory and explanation in social psychology* (pp. 305–327). Guilford Press.

Reis, H. T., Collins, W. A., & Berscheid, E. (2000). The relationship context of human behavior and development. *Psychological Bulletin*, *126*(6), 844–872. https://doi.org/10.1037/0033-2909.126.6.844

Reis, H. T., & Gable, S. L. (2015). Responsiveness. *Current Opinion in Psychology*, *1*, 67–71. https://doi.org/10.1016/j.copsyc.2015.01.001

Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367– 389). Wiley.

Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, *49*(1), 95–112. https://doi.org/10.1037/0022-3514.49.1.95

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied Psychology*, *87*(4), 698–714. http://doi.org/10.1037/0021-9010.87.4.698

Richman, W. L., Kiesler, S., Weisband, S., & Drasgow, F. (1999). A meta-analytic study of social desirability distortion in computer-administered questionnaires, traditional questionnaires, and interviews. *Journal of Applied Psychology*, *84*(5), 754–775. https://doi.org/10.1037/0021-9010.84.5.754

Roberto, M. A. (2003). The stable core and dynamic periphery in top management teams. *Management Decision*, *41*(2), 120–131. https://doi.org/10.1108/00251740310457560

Rogelberg, S. G. & Stanton, J. M. (2007). Understanding and dealing with organizational survey nonresponse. *Organizational Research Methods, 10*(2), 195–209. https://doi.org/10.1177/1094428106294693

Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality, 35*(4), 651–665. https://doi.org/10.1111/j.1467-6494.1967.tb01454.x

Rotter, J. B. (1971). Generalized expectancies for interpersonal trust. *American Psychologist*, *26*(5), 443. https://doi.org/10.1037/h0031464

Rousseau, D. M., & Fried, Y. (2001). Location, location, location: Contextualizing organizational research. *Journal of Organizational Behavior*, *22*(1), 1–13. https://doi.org/10.1002/job.78

Rousseau, D., Sitkin, S., Burt, R., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review, 23*(3), 393– 404. https://doi.org/10.5465/amr.1998.926617

Rupp, D. E., Shao, R., Jones, K. S., & Liao, H. (2014). The utility of a multifoci approach to the study of organizational justice: A meta-analytic investigation into the consideration of normative rules, moral accountability, bandwidth-fidelity, and social exchange. *Organizational Behavior and Human Decision Processes*, *123*(2), 159–185. https://doi.org/10.1016/j.obhdp.2013.10.011

Rusbult, C. E. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology, 16*(2), 172–186. https://doi.org/10.1016/0022-1031(80)90007-4

Rusbult, C. E., & Buunk, B. P. (1993). Commitment processes in close relationships: An interdependence analysis. *Journal of Social and Personal Relationships, 10*(2), 175–204. https://doi.org/10.1177/0265407593101000202

Rusbult, C. E., & Farrell, D. (1983). A longitudinal test of the Investment Model: The impact on job satisfaction, job commitment, and turnover of variations in rewards, costs, alternatives, and investments. *Journal of Applied Psychology, 68*(3), 429–438. https://doi.org/10.1037/0021-9010.68.3.429

Rusbult, C. E., & Van Lange, P. A. (2003). Interdependence, interaction, and relationships. *Annual Review of Psychology*, *54*(1), 351–375. https://doi.org/10.1146/annurev.psych.54.101601.145059

Rusbult, C. E., & Van Lange, P. A. (2008). Why we need interdependence theory. *Social and Personality Psychology Compass*, *2*(5), 2049–2070. https://doi.org/10.1111/j.1751-9004.2008.00147.x

Samimi, M., Cortes, A. F., Anderson, M. H., & Herrmann, P. (2022). What is strategic leadership? Developing a framework for future research. *Leadership Quarterly*, *31,* 101353. https://doi.org/10.1016/j.leaqua.2019.101353

Schaubroeck, J. M., Peng, A. C., & Hannah, S. T. (2013). Developing trust with peers and leaders: Impacts on organizational identification and performance during entry. *Academy of Management Journal*, *56*(4), 1148–1168. https://doi.org/10.5465/amj.2011.0358

Schilke, O., Reimann, M., & Cook, K. S. (2015). Power decreases trust in social exchange. *Proceedings of the National Academy of Sciences, 112*(42), 12950–12955. https://doi.org/10.1073/pnas.1517057112

Schmitt, N., & Ali, A.A. (2015). The practical importance of measurement invariance. In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends* (pp. 327–346). Routledge. https://doi.org/10.4324/9780203867266

Schmitt, N., & Kuljanin, G. (2008). Measurement invariance: Review of practice and implications. *Human Resource Management Review, 18*(4), 210–222. https://doi.org/10.1016/j.hrmr.2008.03.003

Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Past, present, and future. *Academy of Management Review*, *32*(2), 344–354. https://doi.org/10.5465/amr.2007.24348410

Seppälä, T., Lipponen, J., Pirttila-Backman, A. M., & Lipsanen, J. (2011). Reciprocity of trust in the supervisor–subordinate relationship: The mediating role of autonomy and the sense of power. *European Journal of Work and Organizational Psychology*, *20*(6), 755–778. https://doi.org/10.1080/1359432X.2010.507353

Serva, M. A., Fuller, M. A., & Mayer, R. C. (2005). The reciprocal nature of trust: A longitudinal study of interacting teams. *Journal of Organizational Behavior*, *26*(6), 625–648. https://doi.org/10.1002/job.331

Settoon, R. P., & Mossholder, K. W. (2002). Relationship quality and relationship context as antecedents of person-and task-focused interpersonal citizenship behavior. *Journal of Applied Psychology*, *87*(2), 255–267. https://doi.org/10.1037/0021-9010.87.2.255

Shamir, B., & Lapidot, Y. (2003). Trust in organizational superiors: Systemic and collective considerations. *Organization Studies*, *24*(3), 463–491. http://doi.org/10.1177/0170840603024003912

Shapiro, D., Sheppard, B. H., & Cheraskin, L. (1992). Business on a handshake. *Negotiation Journal, 8*(4), 365–377. https://doi.org/10.1111/j.1571-9979.1992.tb00679.x

Sheppard, B. H., & Sherman, D. M. (1998). The grammars of trust: A model and general implications. *Academy of Management Review*, *23*(3), 422–437. https://doi.org/10.5465/amr.1998.926619

Sherony, K. M., & Green, S. G. (2002). Coworker exchange: relationships between coworkers, leader-member exchange, and work attitudes. *Journal of Applied Psychology*, *87*(3), 542–548. https://doi.org/10.1037/0021-9010.87.3.542

Shipp, A. J., & Cole, M. S. (2015). Time in individual-level organizational studies: What is it, how is it used, and why isn't it exploited more often?. *Annual Review of Organizational Psychology and Organizational Behavior, 2*(1), 237–260. http://doi.org/10.1146/annurev-orgpsych-032414-111245

Shuffler, M. L., Diazgranados, D., Maynard, M. T., & Salas, E. (2018). Developing, sustaining, and maximizing team effectiveness: An integrative, dynamic perspective of team development interventions. *Academy of Management Annals*, *12*(2), 688–724. https://doi.org/10.5465/annals.2016.0045

Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019). How to do a systematic review: A best practice guide for conducting and reporting narrative reviews, meta-analyses, and meta-syntheses. *Annual Review of Psychology*, *70*, 747–770. https://doi.org/10.1146/annurev-psych-010418- 102803

Siebert, S., Martin, G., & Bozic, B. (2016). Research into employee trust: epistemological foundations and paradigmatic boundaries. *Human Resource Management Journal*, *26*(3), 269–284. https://doi.org/10.1111/1748-8583.12103

Simons, T. (2002). Behavioral integrity: The perceived alignment between managers' words and deeds as a research focus. *Organization Science*, *13*(1), 18–35. http://doi.org/10.1287/orsc.13.1.18.543

Simons, T., Leroy, H., Collewaert, V., & Masschelein, S. (2015). How leader alignment of words and deeds affects followers: A meta-analysis of behavioral integrity research. *Journal of Business Ethics*, *132*(4), 831–844. https://doi.org/10.1007/s10551-014-2332-3

Simons, T., Leroy, H., & Nishii, L. (2022). Revisiting behavioral integrity: Progress and new directions after 20 years. *Annual Review of Organizational Psychology and Organizational Behavior*, *9*, 365–389. https://doi.org/10.1146/annurev-orgpsych-012420-062016

Simons, T. L., & Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: the pivotal role of intragroup trust. *Journal of Applied Psychology*, *85*(1), 102–111. https://doi.org/10.1037/0021-9010.85.1.102

Simsek, Z., Veiga, J. F., Lubatkin, M. H., & Dino, R. N. (2005). Modeling the multilevel determinants of top management team behavioral integration. *Academy of Management Journal*, *48*(1), 69–84. https://doi.org/10.5465/amj.2005.15993139

Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Methods for studying change and event occurrence*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195152968.001.0001

Skinner, D., Dietz, G., & Weibel, A. (2014). The dark side of trust: When trust becomes a 'poisoned chalice'. *Organization*, *21*(2), 206–224. https://doi.org/10.1177/1350508412473866

Sluss, D. M., & B. E. Ashforth. (2007). Relational identity and identification: Defining ourselves through work relationships. *Academy of Management Review, 32*(1), 9–32. https://doi.org/10.5465/amr.2007.23463672

Spector, P. E. (1994). Using self-report questionnaires in OB research: A comment on the use of a controversial method. *Journal of Organizational Behavior, 15*(5), 385–392. https://doi.org/10.1002/job.4030150503

Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend? *Organizational Research Methods, 9*, 221–232. https://doi.org/10.1177/1094428105284955

Spector, P. E., & Brannick, M. T. (2010). Common method issues: An introduction to the feature topic in organizational research methods. *Organizational Research Methods*, *13*(3), 403–406. https://doi.org/10.1177/1094428110366303

Spector, P. E., & Brannick, M. T. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods, 14*(2), 287–305. https://doi.org/10.1177/1094428110369842

Spector, P. E., Rosen, C. C., Richardson, H. A., Williams, L. J., & Johnson, R. E. (2019). A new perspective on method variance: A measure-centric approach. *Journal of Management*, *45*(3), 855–880. https://doi.org/10.1177/0149206316687295

Stevens, M., MacDuffie, J. P., & Helper, S. (2015). Reorienting and recalibrating inter-organizational relationships: Strategies for achieving optimal trust. *Organization Studies*, *36*(9), 1237–1264. https://doi.org/10.1177/0170840615585337

Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, *25*(2), 173–180. https://doi.org/10.1207/s15327906mbr2502_4

Stirrat, M., & Perrett, D. I. (2010). Valid facial cues to cooperation and trust: Male facial width and trustworthiness. *Psychological Science*, *21*(3), 349–354. https://doi.org/10.1177/0956797610362647

Tai, K., Lin, K. J., Lam, C. K., & Liu, W. (2023). Biting the hand that feeds: A status-based model of when and why receiving help motivates social undermining. *Journal of Applied Psychology, 108*(1), 27–52. https://doi.org/10.1037/apl0000580

Tan, H. H., & Lim, A. K. (2009). Trust in coworkers and trust in organizations. *Journal of Psychology, 143*(1), 45–66. https://doi.org/10.3200/JRLP.143.1.45-66

Tasselli, S., & Kilduff, M. (2018). When brokerage between friendship cliques endangers trust: A personality–network fit perspective. *Academy of Management Journal*, *61*(3), 802–825. https://doi.org/10.5465/amj.2015.0856

Thibaut, J.W., & Kelley, H.H. (1959). *The social psychology of groups*. Wiley.

Thielmann, I., & Hilbig, B. E. (2015). Trust: An integrative review from a person–situation perspective. *Review of General Psychology*, *19*(3), 249–277. http://doi.org/10.1037/gpr0000046

Thomas, G., Martin, R., Epitropaki, O., Guillaume, Y., & Lee, A. (2013). Social cognition in leader- follower relationships: Applying insights from relationship science to understanding relationship-based approaches to leadership. *Journal of Organizational Behavior, 34*(S1), S63–S81. https://doi.org/10.1002/job.1889

Thompson, B. S., & Korsgaard, M. A. (2019). Relational identification and forgiveness: Facilitating relationship resilience. *Journal of Business and Psychology*, *34*(2), 153–167. https://doi.org/10.1007/s10869-018-9533-1

Tomlinson, E. C., Dineen, B. R., & Lewicki, R. J. (2009). Trust congruence among integrative negotiators as a predictor of joint-behavioral outcomes. *International Journal of Conflict Management*, *20*(2), 173–187. https://doi.org/10.1108/10444060910949621

Tomlinson, E. C., & Schnackenberg, A. (2022). The effects of transparency perceptions on trustworthiness perceptions and trust. *Journal of Trust Research*, *12*(1), 1–23. https://doi.org/10.1080/21515581.2022.2060245

Tomlinson, E. C., Schnackenberg, A. K., Dawley, D., & Ash, S. R. (2020). Revisiting the trustworthiness–trust relationship: Exploring the differential predictors of cognition-and affect-based trust. *Journal of Organizational Behavior*, *41*(6), 535–550. https://doi.org/10.1002/job.2448

Tonidandel, S., Williams, E. B., & LeBreton, J. M. (2015). Size matters... just not in the way that you think. In C. E. Lance & R. J. Vandenberg (Eds.), *More statistical and methodological myths and urban legends* (pp. 162–183). Routledge. https://doi.org/10.4324/9780203775851

Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys. *Psychological Bulletin*, *133*(5), 859–883. https://doi.org/10.1037/0033-2909.133.5.859

Tse, H. H., & Ashkanasy, N. M. (2015). The dyadic level of conceptualization and analysis: A missing link in multilevel OB research?. *Journal of Organizational Behavior*, *36*(8), 1176–1180. https://doi.org/10.1002/job.2010

Tsoukas, H. & Chia, R. (2011), Introduction: Why philosophy matters to organization theory. In H. Tsoukas and R. Chia (Eds.), *Philosophy and organization theory: Research in the sociology of organizations* (Vol. 32, pp. 1–21). Emerald. https://doi.org/10.1108/S0733-558X(2011)0000032003

Tversky, A. & Kahneman, D. (1973) Availability: A heuristic for judging frequency and probability, *Cognitive Psychology, 5*(2), 207–32. https://doi.org/10.1016/0010-0285(73)90033-9

Uziel, L., Seemann, M., & Schmidt-Barad, T. (2020). From being alone to being the only one: Neuroticism is associated with an egocentric shift in an alone context. *Journal of Personality*, *88*(2), 339–355. https://doi.org/10.1111/jopy.12494

van Berkel, F. J., Ferguson, J. E., & Groenewegen, P. (2019). Once bitten, twice shy: How anxiety and political blame avoidance cause a downward spiral of trust and control in the aftermath of failed public projects. *Administration & Society*, *51*(4), 545–580. https://doi.org/10.1177/0095399716680056

van Dam, K. (2005). Employee attitudes toward job changes: An application and extension of Rusbult and Farrell's investment model. *Journal of Occupational and Organizational Psychology, 78*(2) 253–272. https://doi.org/10.1348/096317904X23745

van den Akker, O. R., van Assen, M. A., van Vugt, M., & Wicherts, J. M. (2020). Sex differences in trust and trustworthiness: A meta-analysis of the trust game and the gift-exchange game. *Journal of Economic Psychology*, *81*, 102329. https://doi.org/10.1016/j.joep.2020.102329

Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods*, *3*(1), 4–70. https://doi.org/10.1177/109442810031002

Vandenberghe, C., Panaccio, A., Bentein, K., Mignonac, K., Roussel, P., & Ayed, A. K. B. (2019). Time-based differences in the effects of positive and negative affectivity on perceived supervisor support and organizational commitment among newcomers. *Journal of Organizational Behavior, 40*(3), 264–281. https://doi.org/10.1002/job.2324

van der Werff, L., & Buckley, F. (2017). Getting to know you: A longitudinal examination of trust cues and trust development during socialization. *Journal of Management*, *43*(3), 742–770. https://doi.org/10.1177/0149206314543475

van der Werff, L., Freeney, Y., Lance, C. E., & Buckley, F. (2019a). A trait-state model of trust propensity: Evidence from two career transitions. *Frontiers in Psychology*, *10*, 2490. https://doi.org/10.3389/fpsyg.2019.02490

van der Werff, L., Legood, A., Buckley, F., Weibel, A., & de Cremer, D. (2019b). Trust motivation: The self-regulatory processes underlying trust decisions. *Organizational Psychology Review*, *9*(2-3), 99–123. https://doi.org/10.1177/2041386619873616

van Knippenberg, D. (2018). Reconsidering affect-based trust: A new research agenda. In R. H. Searle, A. I. Nienaber, & S. B. Sitkin (Eds.), *The Routledge companion to trust* (pp. 3–13). Routledge. https://doi.org/10.4324/9781315745572

Van Lange, P. A. M., & Balliet, D. (2015). Interdependence theory. In M. Mikulincer & P. R. Shaver (Eds.), *APA handbook of personality and social psychology* (Vol. 3, pp. 65–92). American Psychological Association. https://doi.org/10.1037/14344-003

Vanneste, B. S., Puranam, P., & Kretschmer, T. (2014). Trust over time in exchange relationships: Meta-analysis and theory. *Strategic Management Journal*, *35*(12), 1891–1902. https://doi.org/10.1002/smj.2198

Vanpoucke, E., Wetzels, M., Rozemeijer, F., & Pilzak-Blonska, M. (2022). The impact of asymmetric perceptions of buyer-supplier governance mechanisms on relational rents. *International Journal of Operations & Production Management, 42*(1), 91–121. https://doi.org/10.1108/IJOPM-05-2021-0296

Varoutsa, E., & Scapens, R. W. (2015). The governance of inter-organisational relationships during different supply chain maturity phases. *Industrial Marketing Management*, *46*, 68–82. https://doi.org/10.1016/j.indmarman.2015.01.006

van Zoonen, W., Sivunen, A. E., & Blomqvist, K. (2023). Out of sight–Out of trust? An analysis of the mediating role of communication frequency and quality in the relationship between workplace isolation and trust. *European Management Journal*. Advance online publication. https://doi.org/10.1016/j.emj.2023.04.006

Villena, V. H., Choi, T. Y., & Revilla, E. (2019). Revisiting interorganizational trust: is more always better or could more be worse?. *Journal of Management*, *45*(2), 752–785. https://doi.org/10.1177/0149206316680031

Villena, V. H., & Craighead, C. W. (2017). On the same page? How asymmetric buyer–supplier relationships affect opportunism and performance. *Production and Operations Management*, *26*(3), 491–508. https://doi.org/10.1111/poms.12648

Vogelgesang, G. R., Crossley, C., Simons, T., & Avolio, B. J. (2021). Behavioral integrity: examining the effects of trust velocity and psychological contract breach. *Journal of Business Ethics*, *172*(1), 175-190. https://doi.org/10.1007/s10551-020-04497-2

Wang, H., Peverelli, P. J., & Bossink, B. A. (2015). The development of asymmetric trust in cooperation between large firms and SMEs: Insights from China. *Group Decision and Negotiation*, *24*, 925–947. https://doi.org/10.1007/s10726-014-9422-6

Wang, L., Zhang, C., & Narayanan, S. (2023). The bright side of trust-less relationships: A dyadic investigation of the role of trust congruence on supplier knowledge acquisition across borders. *Journal of Operations Management*. Advance online publication. https://doi.org/10.1002/joom.1235

Wang, M., Sheng, S., & Zhou, K. Z. (2022). Fairness asymmetry, changes in mutual trust, and supplier performance in buyer-supplier exchanges in China: A dyadic view. *Industrial Marketing Management*, *106*, 14–30. https://doi.org/10.1016/j.indmarman.2022.07.013

Wang, M., Zhang, Q., & Zhou, K. Z. (2020). The origins of trust asymmetry in international relationships: An institutional view. *Journal of International Marketing*, *28*(2), 81–101. https://doi.org/10.1177/1069031X19898492

Watkins, T., Lee, S. H., Yam, K. C., Zhan, Y., & Long, L. (2022). Helping after dark: Ambivalent leadership outcomes of helping followers after the workday. *Journal of Organizational Behavior*, *43*(6), 1038–1062. https://doi.org/10.1002/job.2613

Webber, S. S. (2008). Development of cognitive and affective trust in teams: A longitudinal study. *Small Group Research*, *39*(6), 746–769. http://doi.org/10.1177/1046496408323569

Weber, J. M., Malhotra, D., & Murnighan, J. K. (2004). Normal acts of irrational trust: Motivated attributions and the trust development process. *Research in Organizational Behavior*, *26*, 75–101. https://doi.org/10.1016/S0191-3085(04)26003-8

Werbel, J. D., & Henriques, P. L. (2009). Different views of trust and relational leadership: Supervisor and subordinate perspectives. *Journal of Managerial Psychology*, 24(8), 780–796. https://doi.org/10.1108/02683940910996798

Whitener, E. M., Brodt, S. E., Korsgaard, M. A., & Werner, J. M. (1998). Managers as initiators of trust: An exchange relationship framework for understanding managerial trustworthy behavior. *Academy of Management Review*, *23*(3), 513–530. https://doi.org/10.5465/amr.1998.926624

Wickham, R. E., & Knee, C. R. (2012). Interdependence theory and the actor–partner interdependence model: Where theory and method converge. *Personality and Social Psychology Review*, *16*(4), 375–393. https://doi.org/10.1177/1088868312447897

Wicks, A. C., Berman, S. L., & Jones, T. M. (1999). The structure of optimal trust: Moral and strategic implications. *Academy of Management Review*, *24*(1), 99–116. http://doi.org/10.2307/259039

Wieselquist, J., Rusbult, C. E., Foster, C. A., & Agnew, C. R. (1999). Commitment, pro-relationship behavior, and trust in close relationships. *Journal of Personality and Social Psychology*, *77*(5), 942–966. https://doi.org/10.1037/0022-3514.77.5.942

Wildman, J. L., Shuffler, M. L., Lazzara, E. H., Fiore, S. M., Burke, C. S., Salas, E., & Garven, S. (2012). Trust development in swift starting action teams: A multilevel framework. *Group & Organization Management, 37*, 137–170. https://doi.org/10.1177/1059601111434202

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601–617. https://doi.org/10.1177/ 014920639101700305

Williams, L. J., Vandenberg, R. J., & Edwards, J. R. (2009). Structural equation modeling in management research: A guide for improved analysis. *Academy of Management Annals, 3*(1), 543–604. https://doi.org/10.5465/19416520903065683

Williams, M. (2001). In whom we trust: Group membership as an affective context for trust development. *Academy of Management Review*, *26*(3), 377–396. http://doi.org/10.2307/259183

Williams, M. (2007). Building genuine trust through interpersonal emotion management: A threat regulation model of trust and collaboration across boundaries. *Academy of Management Review*, *32*(2), 595–621. http://doi.org/10.5465/amr.2007.24351867

Wilson, J. A., & Cunliffe, A. L. (2022). The development and disruption of relationships between leaders and organizational members and the importance of trust. *Leadership*, *18*(3), 359–382. https://doi.org/10.1177/17427150211056738

Wilson, J. M., Straus, S. G., & McEvily, B. (2006). All in due time: The development of trust in computer-mediated and face-to-face teams. *Organizational Behavior and Human Decision Processes*, *99*(1), 16–33. https://doi.org/10.1016/j.obhdp.2005.08.001

Woody, E., & Sadler, P. (2005). Structural equation models for interchangeable dyads: Being the same makes a difference. *Psychological Methods, 10*(2), 139–158. https://doi.org/10.1037/1082-989X.10.2.139

Yakovleva, M., Reilly, R. R., & Werko, R. (2010). Why do we trust? Moving beyond individual to dyadic perceptions. *Journal of Applied Psychology*, *95*(1), 79–91. https://doi.org/10.1037/a0017102

Yam, K. C., Klotz, A. C., He, W., & Reynolds, S. J. (2017). From good soldiers to psychologically entitled: Examining when and why citizenship behavior leads to deviance. *Academy of Management Journal*, *60*(1), 373–396. https://doi.org/10.5465/amj.2014.0234

Yang, J., & Mossholder, K. W. (2010). Examining the effects of trust in leaders: A bases-and-foci approach. *Leadership Quarterly*, *21*(1), 50–63. https://doi.org/10.1016/j.leaqua.2009.10.004

Yang, J., Mossholder, K. W., & Peng, T. K. (2009). Supervisory procedural justice effects: The mediating roles of cognitive and affective trust. *Leadership Quarterly*, *20*(2), 143–154. https://doi.org/10.1016/j.leaqua.2009.01.009

Yao, J., Brett, J. M., Zhang, Z. X., & Ramirez-Marin, J. (2021). Multi-issue offers strategy and joint gains in negotiations: How low-trust negotiators get things done. *Organizational Behavior and Human Decision Processes*, *162*, 9–23. https://doi.org/10.1016/j.obhdp.2020.10.012

Yao, J., & Storme, M. (2021). Trust building via negotiation: Immediate versus lingering effects of general trust and negotiator satisfaction. *Group Decision and Negotiation*, *30*(3), 507–528. https://doi.org/10.1007/s10726-020-09721-y

Yao, J., Zhang, Z. X., & Brett, J. M. (2017). Understanding trust development in negotiations: An interdependent approach. *Journal of Organizational Behavior*, *38*(5), 712–729. https://doi.org/10.1002/job.2160

Zand, D.E. (1972). Trust and managerial problem solving. *Administrative Science Quarterly, 17*(2), 229–239. https://doi.org/10.2307/2393957

Zapata, C. P., Olsen, J. E., & Martins, L. L. (2013). Social exchange from the supervisor's perspective: Employee trustworthiness as a predictor of interpersonal and informational justice. *Organizational Behavior and Human Decision Processes*, *121*(1), 1–12. https://doi.org/10.1016/j.obhdp.2012.11.001

Zhao, H. A. O., Wayne, S. J., Glibkowski, B. C., & Bravo, J. (2007). The impact of psychological contract breach on work-related outcomes: a meta-analysis. *Personnel Psychology*, *60*(3), 647–680. https://doi.org/10.1111/j.1744-6570.2007.00087.x

Zhong, W., Su, C., Peng, J., & Yang, Z. (2017). Trust in interorganizational relationships: A meta-analytic integration. *Journal of Management*, *43*(4), 1050–1075. https://doi.org/10.1177/0149206314546373

Zhu, Y., & Akhtar, S. (2014). How transformational leadership influences follower helping behavior: The role of trust and prosocial motivation. *Journal of Organizational Behavior*, *35*(3), 373–392. https://doi.org/10.1002/job.1884

Zyphur, M. J., Bonner, C. V., & Tay, L. (2023). Structural equation modeling in organizational research: The state of our science and some proposals for its future. *Annual Review of Organizational Psychology and Organizational Behavior*, *10*, 495–517. https://doi.org/10.1146/annurev-orgpsych-041621- 031401

Zyphur, M. J., & Pierides, D. C. (2017). Is quantitative research ethical? Tools for ethically practicing, evaluating, and using quantitative research. *Journal of Business Ethics, 143*(1), 1–16. https://doi.org/10.1007/s10551-017-3549-8

Zyphur, M. J., & Pierides, D. C. (2020). Statistics and probability have always been value-laden: An historical ontology of quantitative research methods. *Journal of Business Ethics, 167*(1), 1–18. https://doi.org/10.1007/s10551-019-04187-8

Appendix A – Ethical Approval Letter

Professor Finian Buckley
DCU Business School

13 April 2017

REC Reference: **DCUREC/2017/067**

Proposal Title: **Enterprise Ireland Go Global 4 Growth - SME Management Team & Firm Development Research Programme**

Applicant(s): **Prof. Finian Buckley, Dr Lisa van der Werff, Ms Colette Real**

Dear Finian,

Further to expedited review, the DCU Research Ethics Committee approves this research proposal.

Materials used to recruit participants should note that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee.

Should substantial modifications to the research protocol be required at a later stage, a further amendment submission should be made to the REC.

Yours sincerely,

Dr Dónal O'Gorman
Chairperson

DCU Research Ethics Committee

Appendix B – Plain Language Statement

Research Overview

Ethical approval for this research has been granted by the DCU Research Ethics Committee

Research objectives:
The aim of this research is to contribute to the understanding of the SME environment in Ireland today, and to support the drive for global growth by Irish SMEs. Over the course of the Enterprise Ireland "Go Global 4 Growth" Management Team Development programme which is being delivered by Dublin City University Business School, data will be gathered from participating firms in order to understand the factors that contribute to effective workplace relationships and successful business performance outcomes in Irish SMEs preparing for business growth and global expansion.

What will it involve?
During the course of the programme, participants will be asked to complete a number of self-assessment worksheets regarding individual and team attitudes and behaviours, and business challenges. Each worksheet is estimated to take no more than 5 to 10 minutes to complete at any given time.

Confidentiality:
Worksheets will identify the firm to which you belong using an anonymous unique identifier specified by the researcher. You will be asked to provide your initials and the initials of your participating colleagues so that information gathered over the duration of the programme can be linked at individual and team level. Once the information you provide has been linked, all data will be fully anonymised and held securely. Group averaged results will be summarised and written up for presentation and publication in scientific journals, and for sharing with Enterprise Ireland. Individual personal data or that of your team or firm will not be reported in any forum whatsoever.

Voluntary participation:
Your participation is entirely voluntary but much appreciated. If you decide to take part, you are free to withdraw from the study at any time without giving a reason. Your decision will not affect you in anyway. Withdrawal from this research does not affect your participation in the programme.

Concerns and further information:
If you have any concerns about this research or would like some further information, please contact a member of the research team who will do their best to answer your questions:

Prof. Finian Buckley, DCU – finian.buckley@dcu.ie
Dr. Lisa van der Werff, DCU – lisa.vanderwerff@dcu.ie
Ms. Colette Real, DCU – colette.real@dcu.ie

Alternatively, if you have any concerns about the research and wish to contact an independent person, please contact: The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000 e-mail rec@dcu.ie

Thank you in advance for taking the time to contribute to this research. Your help is very much appreciated by the research team.

Appendix C – Sample Questionnaire

Self-Assessment of Team Dynamics

Please think about your working relationship with <u>the first</u> of your colleagues who is participating on this course with you and answer the following questions.

1. **Write the initials of your colleague here.**

To what extent do you agree or disagree with the following statements about your working relationship with your colleague?	Disagree strongly (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Agree strongly (5)
2. My colleague is very capable of performing his/her job.	O	O	O	O	O
3. My colleague is known to be successful at the things he/she tries to do.	O	O	O	O	O
4. My colleague has much knowledge about the work that needs to be done.	O	O	O	O	O
5. I feel very confident about my colleague's skills.	O	O	O	O	O
6. My colleague has specialised capabilities that can increase our performance.	O	O	O	O	O
7. My colleague is well qualified.	O	O	O	O	O
8. My colleague is very concerned about my welfare.	O	O	O	O	O
9. My needs and desires are very important to my colleague.	O	O	O	O	O
10. My colleague would not knowingly do anything to hurt me.	O	O	O	O	O
11. My colleague really looks out for what is important to me.	O	O	O	O	O
12. My colleague will go out of his/her way to help me.	O	O	O	O	O
13. My colleague has a strong sense of justice.	O	O	O	O	O
14. I never have to wonder whether my colleague will stick to his/her word.	O	O	O	O	O
15. My colleague tries hard to be fair in dealings with others.	O	O	O	O	O
16. My colleague's actions and behaviors are **<u>not</u>** very consistent.	O	O	O	O	O
17. I like my colleague's values.	O	O	O	O	O
18. Sound principles seem to guide my colleague's behavior.	O	O	O	O	O
19. My colleague and I have a two-way exchange relationship.	O	O	O	O	O
20. I do not have to specify the exact conditions to know my colleague will return a favor.	O	O	O	O	O
21. If I do something for my colleague, he or she will eventually repay me.	O	O	O	O	O
22. I have a balance of inputs and outputs with my colleague.	O	O	O	O	O
23. My efforts are reciprocated by my colleague.	O	O	O	O	O
24. My relationship with my colleague is composed of comparable exchanges of giving and taking.	O	O	O	O	O
25. When I give effort at work, my colleague will return it.	O	O	O	O	O
26. Voluntary actions on my part will be returned in some way by my colleague.	O	O	O	O	O

255

Appendix C – Sample Questionnaire (continued)

Self-Assessment of Team Dynamics

To what extent do you agree or disagree with the following statements about your working relationship with your colleague?	Disagree strongly (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Agree strongly (5)
27. My colleague takes on extra responsibilities in order to help me when things get demanding at work.	O	O	O	O	O
28. My colleague helps me with difficult assignments, even when assistance is not directly requested.	O	O	O	O	O
29. My colleague assists me with heavy workloads even though it is not part of the job.	O	O	O	O	O
30. My colleague listens to me when I have to get something off my chest.	O	O	O	O	O
31. My colleague takes time to listen to my problems and worries.	O	O	O	O	O
32. My colleague takes a personal interest in me.	O	O	O	O	O
33. My relationship with my colleague is an important part of who I am at work.	O	O	O	O	O
34. If someone criticised my relationship with my colleague, it would feel like a personal insult.	O	O	O	O	O
35. My relationship with my colleague is vital to the kind of person I am at work.	O	O	O	O	O
36. My relationship with my colleague is important to my self-image at work.	O	O	O	O	O

How willing are you to….	Not at all willing		Somewhat willing		Completely willing
37. Rely on your colleague's work-related judgements.	O	O	O	O	O
38. Rely on your colleague's task-related skills and abilities.	O	O	O	O	O
39. Depend on your colleague to handle an important issue on your behalf.	O	O	O	O	O
40. Rely on your colleague to represent your work accurately to others.	O	O	O	O	O
41. Depend on your colleague to back you up in difficult situations.	O	O	O	O	O
42. Share your personal feelings with your colleague.	O	O	O	O	O
43. Confide in your colleague about personal issues that are affecting your work.	O	O	O	O	O
44. Discuss how you honestly feel about your work, even negative feelings and frustration.	O	O	O	O	O
45. Discuss work-related problems or difficulties that could potentially be used to disadvantage you.	O	O	O	O	O
46. Share your personal beliefs with your colleague.	O	O	O	O	O

Your confidential company identifier	
Your initials	**The initials of each of your two colleagues on this programme**