

## A Critical Review of the Conceptualization, Operationalization, and Empirical Literature on Cognition-Based and Affect-Based Trust

**Alison Legood<sup>a</sup>, Lisa van der Werff<sup>b</sup>, Allan Lee<sup>a</sup>,  
Deanne den Hartog<sup>c</sup> and Daan van Knippenberg<sup>d</sup>**

<sup>a</sup>*University of Exeter Business School*; <sup>b</sup>*Dublin City University*; <sup>c</sup>*University of Amsterdam*;

<sup>d</sup>*Drexel University*

**ABSTRACT** Trust plays a pivotal role in the development and maintenance of effective working relationships. In this paper we offer a critical review of the conceptualization and operationalization of cognition-based and affect-based trust. While definitions and measures of trust are abundant, the view of trust as a concept with cognitive and affective bases is well established. Nevertheless, the validity of this approach has rarely been examined. Our theoretical and empirical review (content validity study, systematic review and meta-analysis) of the literature reveals a failure to fully capture cognition or affect in current trust theory and measurement. We find the construct of affect-based trust to be particularly problematic in its current form. Resolving these issues is critical to advancing our understanding of the differentiating roles of these two important bases of trust. We detail areas for future research on the conceptualization and measurement of trust to stimulate theoretical exploration and methodological advances.

**Keywords:** affect-based trust, affect, cognition, cognition-based trust, critical review, trust

## INTRODUCTION

Trust represents an important theoretical construct within organisational studies (Bunker et al., 2004) and has been defined as ‘a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviours of another’ (Rousseau et al., 1998, p. 395). A plethora of research has emerged investigating the antecedents as well as the proximal and distal outcomes of trust in referents

*Address for reprints:* Alison Legood, University of Exeter Business School, Rennes Drive, Exeter, UK (a.legood@exeter.ac.uk).

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

at different levels (e.g., trust in the individual, team, unit, and organization; Fulmer and Gelfand, 2012). Despite the growing popularity of the construct, the conceptualization and measurement of trust is far from uniform in the literature. Many scholars argue that trust is unidimensional (e.g., Mayer et al., 1995), while others conceptualize and measure it as a multidimensional construct. Indeed, a substantive body of work positions trust as being made up of distinct categories with different bases (e.g., Lewicki and Bunker, 1996; McAllister, 1995; Rousseau et al., 1998). By far the most prominent multidimensional conceptualization is McAllister's (1995) which suggests that trust can be based on cognition or affect (see also Lewicki and Bunker, 1996).

Within this popular approach, cognition-based trust describes a rational evaluation of an individual and reflects beliefs about that individual's reliability, dependability and competency. In contrast, affect-based trust is positioned as an emotional attachment that stems from the mutual care and concern that exist between individuals (Bigley and Pearce, 1998). The bifurcation of trust into two bases is predicated on the notion that cognition-based and affect-based trust are distinct and therefore should have differential antecedents and outcomes (McAllister, 1995). Studies often argue for, and try to test, such differences (e.g., Erdem and Ozen, 2003; Parayitam and Dooley, 2009; Yang et al., 2009; Zhu and Akhtar, 2014a).

Despite this, and as we highlight in this review, there is a lack of clear and consistent empirical support for the distinctiveness of cognition-based and affect-based trust. For example, some studies find cognition-based trust is more strongly associated with outcomes, such as job performance (e.g., Yang et al., 2009; Zhu and Akhtar, 2014b), while others find affect-based trust is more strongly associated with the same outcomes (e.g., Lu and Hao, 2013; Yang and Mossholder, 2010), or report no significant differences between the two (e.g., Yang and Wu, 2014). Further to this, a meta-analysis of team trust by De Jong et al. (2016) revealed that both cognitive and affective trust predicted team performance to a similar extent. As such, accurately specifying the nomological network of affect-based and cognition-based trust is currently problematic. Finally, the overall correlation between the affective and cognitive components of trust tends to be very high (e.g.,  $r = 0.76$ ; De Jong et al., 2016), again begging the question as to whether these constructs, or their measures, are indeed sufficiently distinct. As we will highlight throughout our review, a critical implication of these issues is that as it currently stands it is difficult to establish firm conclusions from this empirical literature. One reason for this may be that cognition-based and affect-based trust are not functionally distinct. Another is that the inconsistent empirical findings and generally high levels of correlation may reflect a methodological artefact.

In this review we highlight the conceptual, empirical and measurement issues facing this multidimensional conceptualization of trust. We also highlight important avenues for advancing our understanding of trust and its affective and cognitive bases. In the first section of our review, we examine the definitions of cognition and affect-based trust and explore the theoretical distinction between these two bases while drawing parallels with other theoretical trust models. In doing so, we consider the theoretical limitations of cognition and affect-based trust as capturing only a small subset of cognitive bases for trust with limited attention to the emotions and moods that are typically conceptualized as representing affect (van Knippenberg, 2018). The second

section of our review takes a critical view of the current approach to the measurement of trust. We report the findings of a content analysis study that assesses the extent to which five commonly used trust scales actually capture affective and cognitive content, as rated by our subject matter experts (SMEs). We then offer a systematic review of the empirical literature on cognition and affect-based trust including a meta-analytic examination of the distinctiveness and nomological network of cognition-based and affect-based trust across 184 empirical studies. Finally, we present an agenda for future research in this area.

Taken together our critical review offers three important contributions to the literature. Our primary contributions are to the trust literature where the insights provided challenge our understanding of the bases of trust and in particular the extent to which we have captured affect-based trust in the literature to date. Specifically, we question the dominant multidimensional conceptualisation and the popular operationalisation of trust based on McAllister (1995). We argue that neither the theoretical foundations nor the commonly used measures of cognition and affect-based trust are fit for purpose. We find the theoretical distinction between cognition-based and affect-based trust implied by their names is not reflected in their definitions or measurement. This leads to a deficit in our understanding of affective bases for trust and an overly narrow conceptualization of the cognitions that drive trust decisions. With this review, we contribute to a small but growing literature which offers a dissenting view regarding the current treatment of multidimensional trust in the literature (e.g., Li, 2015; van Knippenberg, 2018).

Second, our review also contributes to the trust literature by reframing our understanding of trust and stimulating further work in this field. We do this through arguing that trust is best conceptualized as a unidimensional construct (e.g., Mayer et al., 1995) that represents the willingness to be vulnerable but that the bases for this willingness are far broader than those currently represented in the unidimensional trust literature. In our future research directions we highlight several overlooked cognitive bases of trust. We also theorize regarding the role of affect in influencing trust both directly and through the interplay with cognitive trust cues. In doing so, we integrate theory from the literature on judgment and decision making (e.g., Lerner et al., 2015) as a framework to build our understanding of trust.

Finally, our contribution extends beyond the trust domain to the wider management literature. It is well established that trust is a salient concept that is relevant to several management disciplines and debates and as such is important to better understand. Our review and conclusions can serve to inform other important constructs which are also theorized to comprise of cognitive and affective bases or dimensions. For example, notions of both cognition and affect are commonly found within the job attitudes literature, and recent work there suggests cognition and affect in relation to such attitudes are hard to separate (Judge and Kammeyer-Mueller, 2012). In a related vein, increasing attention to the role of affect in leadership processes shows that affective and cognitive processes are intertwined and mutually influence each other (van Knippenberg and Van Kleef, 2016). As such, our theorizing relating to the nature of emotions and the interplay of cognition and affect seems relevant for the wider management literature as well.

## A CONCEPTUAL/THEORETICAL REVIEW

### The Unidimensional and Multidimensional View of Trust

A pertinent issue plaguing the trust literature concerns the tendency for researchers to conceptualize and operationalize trust differently across theoretical perspectives and empirical studies. These discrepancies are particularly evident in the discussion of the dimensional nature of trust (Lewicki et al., 1998; Lewicki et al., 2006; Sitkin and Roth, 1993). Essentially two paradigms of thought have emerged (Tomlinson et al., 2020) and developed largely in parallel. A strong unidimensional focus is evident in the literature particularly with regard to the operationalization of trust with the most commonly used definitions largely adopting a unidimensional stance. For example, Mayer et al. (1995) define trust as the ‘willingness to be vulnerable to the actions of a trustee based on the expectation that the trustee will perform a particular action, irrespective of any monitoring or control mechanism’ (p. 712). Similarly, Rousseau et al.’s (1998) cross-discipline review defined trust as a ‘psychological state comprising the intentions to accept vulnerability based on positive expectations of the intentions of another’ (p. 395). The trust measures most often used also only capture a single dimension of trust, which is cognitive in nature (McEvily and Tortoriello, 2011). For example, the Mayer et al. (1995) trust as a unitary construct and the corresponding ‘willingness to be vulnerable’ measure has had considerable uptake in the empirical literature (McEvily et al., 2003).

Despite the above, the view that different forms of trust exist, and that the type of trust held may make a difference to its effects, is a second popular one (McEvily and Tortoriello, 2011). Indeed, much of the seminal theoretical work in the field positions trust as multidimensional (e.g., Lewicki and Bunker, 1996; Rousseau et al., 1998). As a result there appears to be a disconnect between theory, which suggests that trust can have different bases, and empirical research where this is often ignored (McEvily et al., 2003).

### Multidimensional Models of Trust

One prominent multidimensional approach to understanding trust has been to separate dimensions of trust on the basis of whether they are cognitive or affective. More generally, distinctions between cognition and affect originated in the discipline of psychology where they have been considered as components of the mind and human experience since the 18<sup>th</sup> century (Forgas, 2008). Cognition is arguably the broader of the two concepts and is defined by the American Psychological Association as consisting of all aspects of knowing and awareness including processes such as perception, reasoning and judgment (APA, 2020). The study of cognition in organizations has largely dominated the management and organizational psychology literature over the last number of decades and is discussed across a wide range of topics and organizational activities (Hodgkinson and Healey, 2008). Narrowing to the concept of trust, van der Werff et al. (2019, p.110) describe trust cognitions as ‘all perceptual, evaluative, reasoning, and judgmental processes involved in a trust decision’. Building on this, we would define cognition-based trust to reflect *trust that is based on any type of cognition including perception of*

*and judgment about, characteristics of another party, the quality of the relationship, and the social environment in which interactions are taking place.*

In contrast, affect is typically defined as feeling states including emotion and mood (Barsade and Gibson, 2007; Frijda, 1986). This aspect of the human experience has received considerably less attention in the wider organisational literature until what has been termed the affective revolution of the last few decades (Ashkanasy et al., 2017). Commonly accepted distinctions between cognition and affect-based trust emerged in the literature in the mid-1990s, around the same time as the beginnings of the affective revolution. Unfortunately, seminal theory in the multidimensional trust literature did not reflect definitions of cognition and affect as conceptualized in the wider psychological and organisational field. Looking at the definition of affect, we would define affect-based trust as *trust that is based on experiences of emotion and mood which is either specific to a particular relationship, or more generalised, incidental affect which influences trust in that relationship.*

Instead, the most influential theorizing in this area of the trust literature is that of McAllister (1995) who draws on the work of Shapiro (1990) and Lewis and Weigert (1985), among others, to delineate cognition-based and affect-based trust. As noted, McAllister (1995) describes cognition-based trust as grounded in judgments about another's reliability, dependability, and competence which provide a rational basis for trust. Affect-based trust is described as being underpinned by emotional bonds and expectations of interpersonal care and concern (see also Bigley and Pearce, 1998). McAllister (1995) argues that cognition-based trust in another person is built on the outcomes of previous interactions as well as perceptions of similarity in characteristics such as culture or ethnicity and formal aspects of the other's professional qualifications. Affect-based trust is argued to arise from perceptions of the motives of the other party based on experiences such as frequency of interaction and provision of help and assistance. McAllister (1995) also proposed that cognition-based trust is more superficial but provides a foundation on which affect-based trust can develop.

Parallels can be drawn between McAllister's (1995) conceptualization and other prominent trust models that adopt a multidimensional view of trust. For instance, Lewicki and Bunker (1996) developed a model of trust, founded on the work of Shapiro et al. (1992). They outlined three distinct bases of trust: calculus-based trust, knowledge-based trust, and identification-based trust. Calculus and knowledge-based trust both emphasize the importance of the potential costs and benefits of a relationship and of reliability, met expectations, and promise keeping. These forms of trust are, in theory, cognitive and rational in nature, similar to McAllister's (1995) cognition-based trust. The third stage of trust development Lewicki and Bunker (1996) proposed, identification-based trust, forms a different yet still cognitive base of trust, which is founded in identification and self-definitional processes such as a sense of shared values, desires, and understanding. Later efforts to incorporate a fourth, affect-based trust dimension in the Lewicki and Bunker model have been published only in the form of a conference paper (McAllister et al., 2006) and perhaps as a result have not been as heavily cited in the literature.

Rousseau et al. (1998) also refer to calculus-based trust, in line with Lewicki and Bunker (1996), and distinguish it from relational trust. Their conceptualization of relational trust is similar to what McAllister calls affect-based trust and is defined as 'an emotional response based on interpersonal attachment and identification' (Rousseau et al., 1998; p.

398). In proposing this construct they explicitly draw on the work of both affect-based and identification-based trust. In a similar vein to McAllister (1995), Rousseau and colleagues also discuss the development of dimensions over time proposing that calculative trust is gradually replaced by relational trust through repeated interactions. The proposed differing developmental trajectories of these dimensions reflects the belief that these dimensions of trust are associated with distinctive developmental timelines (Dietz, 2011). However, the specifics of how these dimensions interplay or develop over time has received scant theoretical (or empirical) attention (Korsgaard et al., 2018). Moreover, despite evidence that emotion is found to have an immediate impact on job attitudes (Judge and Kammeyer-Mueller, 2012) as well as judgment and decision making (Forgas, 1995), traditional trust theory has tended to suggest that affect-based trust takes longer to develop.

Finally, conceptual overlap of cognition and affect-based trust can also be seen with Mayer et al.'s (1995) trust model. While Mayer and colleagues propose a unidimensional model of trust, they argue that its immediate antecedent is a multidimensional trustworthiness cognition consisting of judgments of the other party's ability, benevolence, and integrity. While an affective versus cognitive distinction in trustworthiness dimensions is not drawn by Mayer and colleagues themselves either in their 1995 paper or in a later extension to their earlier work where they argue they take a cognitive approach (Schoorman et al., 2007), others have drawn parallels. Specifically, the definitions offered by Mayer et al. (1995) for ability and integrity as elements of trustworthiness have been likened to McAllister's cognition-based trust. Benevolence trustworthiness and affect-based trust have been considered similar in definition as both are strongly focused on relationships and emotional bonds between actors (e.g., Colquitt et al., 2011; van der Werff and Buckley, 2017). Li (2015) also distinguishes between two forms of trustworthiness, static trustworthiness which relates to relatively fixed traits of the trustee such as those captured by cognition-based trust, and dynamic trustworthiness which captures relationship specific dimensions in line with how affect-based trust has been treated. These trustworthiness antecedents are also primarily relational rather than affective in the sense of being based in experienced moods and emotions.

The key difference between these conceptualizations of trustworthiness and McAllister's (1995) cognition and affect-based trust is that these elements of trustworthiness are seen as proximal antecedents of trust rather than as different forms of trust. Indeed, Mayer et al. (1995) are careful not to confound trust and its antecedents. As such, the unidimensional view implies that even if trust itself is conceptualized to be unidimensional, trust might have different *bases*, and what such trust is based on may make a difference to its effects. In contrast, scholars such as McAllister (1995) advocate for the multidimensional view wherein qualitatively different *dimensions* of trust are believed to exist (Dietz, 2011).

Looking closely at the descriptions offered by McAllister (1995) for both cognition and affect-based trust leads to two important observations. The first is that cognition-based trust reflects cognitions specifically about the trustee. For example, cognitions around the other party's capability are prominent in its definition. Although the characteristics of another party are just a subset of the possible cognitions on which trust might be based, McAllister's (1995) definition of cognition-based trust does not extend beyond this. Li (2007) describes this focus of trustworthiness as being a form of depersonalized trust that

largely ignores more relational cognitions related to shared values and interests. As these cognitions are person-centric they also exclude any potentially relevant, broader cognitions (e.g., situational influences, personal motivations, third party influences) that might influence a willingness to be vulnerable to another party.

Second, affect-based trust, as currently treated in the literature, does not contrast with what is called cognition-based trust as being non-cognitive in nature. Rather affect-based trust seems to be based on cognitions about the relationship with the trustee instead of (characteristics of) the trustee per se. For instance, affect-based trust includes expectations for benevolent actions as well as judgments about the strength or quality of the relationship. This distinction is a departure from the work of Lewis and Weigert (1985) on emotional and cognitive trust on which McAllister (1995) draws. Specifically, Lewis and Weigert (1985) consider all aspects of trustworthiness to provide the 'good reasons' on which cognitive processes of trust are based, including expectations for benevolent action. They also highlight the emotional bond between those in a trusting relationship and comment on the emotionality of trust violations that lead to outrage and hurt the foundations of the relationship. In both accounts, the conceptualization of affect-based trust certainly has more affective connotations than that of cognition-based trust, but it does not capture a purely affective process in line with dominant definitions of affect (e.g., Frijda, 1986) or our definition of affect-based trust provided above. The relationship-based nature of the concept is more prominent than the presumed affective basis, and for the most part, affect (emotions and mood) is not explicitly included.

Commonalities with other theoretical work can be seen here (e.g., Lewicki and Bunker, 1996; Rousseau et al., 1998). Most notably, all models appear to be capturing some form of cognition, albeit typically a rather narrow subset. Further they all discuss a more relational side of trust, which for the most part, may include elements of affect. Importantly however the models confound affect with more cognitive assessments about the relationship between the trustor and trustee. Thus, the relationship and not affect is center-stage in all these models. As such, both cognition and affect-based trust are in fact based on cognitions. What is currently called affect-based trust strongly confounds affect with what would be more accurately described as a cognitive assessment of the relationship. We are not suggesting of course that cognitions about the relationship are not important, indeed trust is an inherently relational process. However, if our intention is to understand an *affect-based* trust (and to potentially distinguish this from a separate cognition-based trust) then we would argue that affect should play a more central and prominent role in its definition and theorizing than is currently the case. To clarify the above, we summarized the literature in Table I and mapped out the conceptual space in Figure 1.

## Conclusion of the Conceptual/Theoretical Review

Definitional issues with these two trust bases have begun to be recognized in the literature and as such, we propose clearer and more focused definitions of both (see Figure 1). Some scholars have proposed that while cognition-based trust focuses on the potential benefits provided by another party, affect-based trust is a direct assessment of the relationship between the two parties (Colquitt et al., 2014; Yang et al., 2009). This has led

Table I. A summary of affect and cognition-based work on trust

	<i>McAllister (1995)</i>	<i>Lewicki and Bunker (1996)</i>	<i>Rousseau et al. (1998)</i>	<i>Mayer et al. (1995)</i>
Dimensionality of Trust	Two dimensions: cognition-based trust, affect-based trust	Three dimensions: calculus-based trust, knowledge-based trust, identification-based trust	Three dimensions: calculative trust, relational trust, institutional trust	Unidimensional. Preceded by multidimensional trustworthiness cognitions: ability, benevolence, integrity
Trust Cognitions	Cognition-based trust	All dimensions refer to cognitive processes varying from rational weighing up of costs and benefits to considering what is known about the other and strongly identifying with another party	Calculus-based trust seen as a rational process based on a judgment that the trustee will act in a way that is beneficial. The judgment includes perceptions of deterrence or control in the environment and information regarding the characteristics of the other party.	Trust itself is a willingness or intention to be vulnerable.
			Relational trust is based on information about the trustee and the relationship	Trustworthiness is an aggregate perception of the characteristics of the other party. The ability and integrity sub-dimensions of this are also widely recognised as reflecting trust related cognition.

(Continues)

Table I. (Continued)

	<i>McAllister (1995)</i>	<i>Lewicki and Bunker (1996)</i>	<i>Rousseau et al. (1998)</i>	<i>Mayer et al. (1995)</i>
Trust Affect			Emotion is thought to be an aspect of relational trust where long-term interaction leads to the development of emotional bonds and attachments and socioemotional support. However, trust is based on an evaluation of these bonds not the emotion they evoke	While benevolence in trustworthiness is sometimes considered to have emotional connotations, it is fundamentally still a perception or judgment about the motives of the other party

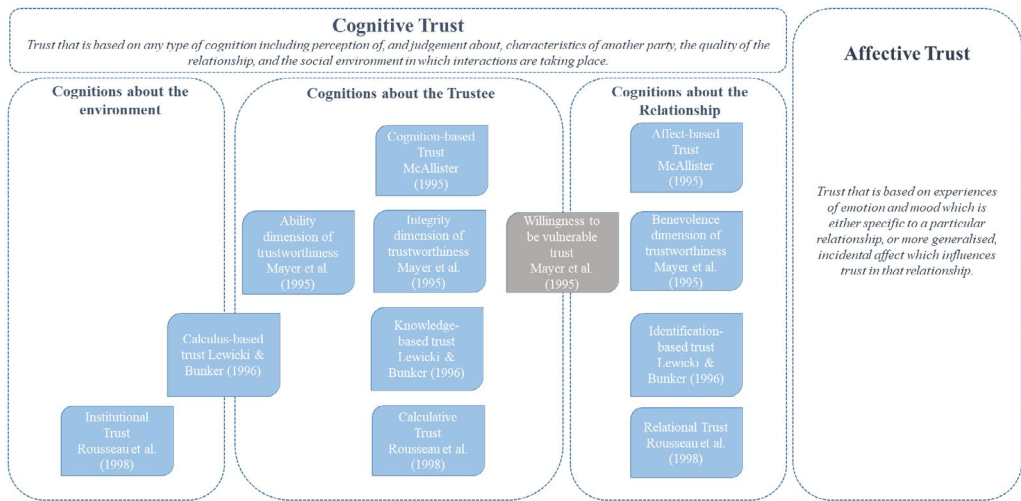


Figure 1. Conceptual map

to the suggestion that affect-based trust, as it has been treated in the literature to date, should be more accurately termed ‘relationship-based trust’ (van Knippenberg, 2018) as while the relationship is described as an ‘emotional bond’, affect and emotions are not explicitly captured. Instead, they are either implied, not prominent, and sometimes even absent.

## MEASUREMENT AND EMPIRICAL REVIEW

Given the problems identified above with the theoretical distinction between cognition and affect-based trust an important next step would be to consider the body of empirical literature that has amassed in this field. We conduct this phase of our review in two key steps. First, we review current measurement of cognitive and affective trust based on the results of a content analysis of five scales which capture multidimensional aspects of trust. Then we provide a systematic review and meta-analysis of empirical research studying cognition and affect-based trust.

### The Measurement of Cognition-Based and Affect-Based Trust

Operationalizations of a construct are the mechanism for bridging theory and empirical research. The development and use of accurate and study-appropriate measures of theoretical constructs like trust are the basic building blocks of quantitative empirical activity. One way in which the accuracy of a measure is recognized is when item content provides representative coverage of the theoretical construct. So, what do scales measuring cognition and affect-based trust actually assess? A close lexical examination of the items designed by McAllister (1995) confirms our assessment of the theory in that the cognitive items focus predominantly on cognitions about the characteristics of the other party (somewhat analogous to trustworthiness) while the affect-based trust items capture a broader perspective. Of the five items designed to capture affect-based trust

(see Table II for the formulation), only one has a predominantly affective focus (i.e., 'We would both feel a sense of loss if one of us was transferred and we could no longer work together'). Other items in the scale appear to be quite light in affective content and include cognitions about the relationship (e.g., 'We have a sharing relationship. We can both freely share our ideas, feelings and hopes') or further assessments or expectations for the other party's character or motives (e.g., 'If I shared my problems with this person, I know (s)he would respond constructively and caringly').

As yet there has been little systematic research dedicated to assessing the validity of commonly used trust measures and the measurement of trust has been described as 'rudimentary and highly fragmented' (McEvily and Tortoriello, 2011, p. 1269). To address this, we conducted a content validity analysis wherein 31 subject matter experts (SMEs) engaged in an item-level review of five scales, that ostensibly assess cognition-based and affect-based trust. Our SMEs all hold a PhD in organizational behaviour or organizational psychology and expertise in the fields of trust, emotions, or general organizational behaviour. We were guided in our choice of scales by the results of our systematic review (reported later) and the recommendations given in the trust measurement review by McEvily and Tortoriello (2011). Accordingly, we focus on the scale designed by McAllister (1995) but also include Mayer and Davis (1999), Gillespie (2003) and Cummings and Bromiley (1996) which were identified by McEvily and Tortoriello (2011) as being the most noteworthy and replicated scales for measuring trust between individuals within an organization. In the systematic review presented later in this manuscript, we found that in studies measuring cognition-based and affect-based trust that do not report using McAllister (1995), the most commonly represented scale was developed by Yang and colleagues (Yang, 2005; Yang and Mossholder, 2006; Yang et al., 2009). Thus, we also include the scale of Yang and Mossholder (2006) resulting in a total of 64 items from 5 measures to be considered.

Given the aforementioned issues regarding the definitions of cognition and affect-based trust, we turned to the wider literature for guidance in providing definitions for these bases (e.g., Lee et al., 2015). As such definitions for cognition and affect were taken from attitude research (an 'other' option, namely behavioural was also given). Attitude theory constitutes an established body of research which clearly delineates between different types of attitude content, which holds heuristic value here. As such, SMEs, in our content analysis, were asked to rate each item according to whether it captures cognitive or affective evaluations related to trust using definitions based on those offered in the attitude research literature (see Appendix A).

The results of the full content analysis are presented in Table II. In our discussion here we will focus predominantly on the McAllister (1995) scale given its dominance as the primary operationalization of cognition and affect-based trust. With regard to Table II, two important observations require discussion. First, there is considerable variation within McAllister's (1995) affect-based scale. For instance, item 3 was viewed by 81 per cent of SMEs as affect-based, whereas 52 per cent of SMEs felt Item 1 was in fact affect-based. Item 2 was viewed as not being either affective or cognitive in content by 65 per cent of SMEs. SMEs were also mixed in their ratings of the remaining two items. Interestingly, averaging across the 5 items that are labeled affect-based, only 43 per cent of the SME ratings indicate them to indeed reflect primarily affect-based content.

Table II. Content validity study findings

Scale	Item	Cognitive	Affective	Other
McAllister (1995) Cognition-based trust	This person approaches his/her job with professionalism and dedication	26	0	5
	Given this person's track record, I see no reason to doubt his/her competence and preparation for the job	27	0	4
	I can rely on this person not to make my job more difficult by careless work	20	1	10
	Most people, even those who aren't close friend of this individual trust and respect him/her at work	21	8	2
	Other work associates of mine who must interact with this individual consider him/her to be trustworthy	20	4	7
McAllister (1995) Affect-based trust	If people knew more about this individual and his/her background they would be more concerned and monitor his/her performance more closely	23	3	5
	We have a sharing relationship. We can both freely share our ideas, feelings and hopes	5	16	10
	I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen	7	3	21
	We would both feel a sense of loss if one of us was transferred and we could no longer work together	4	25	2
	If I shared my problems with this person, I know(s)he would respond constructively and caringly	13	9	9
Mayer and Davis (1999) Ability	I would have to say that we have both made considerable emotional investments in our working relationship	7	14	10
	This individual is very capable of performing his/her job	30	0	1
	This individual is known to be successful in the things he/she tries to do	31	0	0
	This individual has much knowledge about the work that needs to be done	30	0	1
	I feel very confident about this individual's skills	21	10	0
	This individual has specialized capabilities that can increase our performance	31	0	0
	This individual is well qualified	30	0	1

(Continues)

Table II. (Continued)

Scale	Item	Cognitive	Affective	Other
Mayer and Davis (1999) Benevolence	This individual is very concerned about my welfare	19	9	3
	My needs and desires are very important to this individual	19	6	6
	This individual would not knowingly do anything to hurt me	16	10	5
	This individual really looks out for what is important to me	20	5	6
	This individual will go out of his/her way to help me	19	4	8
Mayer and Davis (1999) Integrity	This individual has a strong sense of justice	27	3	1
	I never have to wonder whether this individual will stick to his/her word	24	3	4
	This individual tries hard to be fair in dealings with others	25	0	6
	This individual's actions and behaviours are not very consistent	23	2	6
	I like this individual's values	8	23	0
Mayer and Davis (1999) Trust	Sound principles see to guide this individual's behaviour	25	2	4
	If I had my way, I wouldn't let this individual have any influence over issues that are important to me	10	4	17
	I would be willing to let this individual have complete control over my future in this company	9	3	19
	I really wish I had a good way to keep an eye on this individual	7	12	12
	I would be comfortable giving this individual a task or a problem which was critical to me, even if I could not monitor their actions	13	3	15
Gillespie (2003) Reliance	I can rely on this individual's work-related skills and abilities	22	1	8
	I can rely on this individual's task-related skills and abilities	22	1	8
	I can depend on this person to handle an important issue on my behalf	17	4	10
	I can rely on this individual to represent my work accurately to others	22	1	8
	I can depend on this individual to back me up in difficult situations	19	4	8

(Continues)

Table II. (Continued)

Scale	Item	Cognitive	Affective	Other
Gillespie (2003) Disclosure	I can share my personal feelings with this individual	5	8	18
	I can confide in this individual about personal issues that are affecting my work	10	2	19
	I can discuss how I honestly feel about my work, even negative feelings and frustration	4	9	18
	I can discuss work-related problems or difficulties that could potentially be used to disadvantage me	5	1	25
Cummings and Bromiley (1996) Organizational Trust Inventory	I can share my personal beliefs with this individual	7	5	19
	I think that this individual tells the truth in negotiations	27	3	1
	I think that this individual meets their negotiated obligations	31	0	0
	In my opinion this individual is reliable	28	3	0
	I think that this individual succeeds by stepping on other people	24	4	3
	I feel that this individual tries to get the upper hand	11	16	4
	I think that this individual takes advantage of my problems	22	4	5
	I feel that this individual negotiates with me honestly	12	17	2
	I feel that this individual will keep their work	12	17	2
	I think that this individual does not mislead me	28	1	2
Yang and Mossholder (2006) Cognition-based trust	I feel that this individual tries to get out of their commitments	14	13	4
	I feel that this individual negotiates joint expectations fairly	15	12	4
	I feel that this individual takes advantage of people who are vulnerable	10	15	6
	I can depend on this individual to meet his/her responsibilities	19	2	10
	I can rely on this individual to do what is best at work	21	1	9
	This individual follows through with commitments s(he) makes	25	0	6
	Given this person's track record, I see no reason to doubt his/her competence	29	0	2
	I'm confident in this individual because s(he) approaches work with professionalism	24	5	2

(Continues)

Table II. (Continued)

Scale	Item	Cognitive	Affective	Other
Yang and Mossholder (2006) Affect-based trust	I'm confident that this individual will always care about my personal needs at work	17	14	0
	If I shared my problems with this person, I know(s)he would respond with care	16	8	7
	I'm confident that I could share my work difficulties with this individual	14	7	10
	I'm sure I could openly communicate my feelings to this individual	12	9	10
	I feel secure with this individual because of his/her sincerity	6	23	2

The second important observation of Table II is the fact that the cognition-based scale is rated to be much more consistent with its aim. Across the 6 items 74 per cent of the ratings indicated the items to be cognitive in content.

The fact that there is a substantial degree of variation in the affect-based scale as to whether the items are seen as affective is problematic. Put simply, the scale that ostensibly assesses affect-based trust also, and in the eyes of experts even more so, assesses cognition-based or another type of trust. Based on our SME's responses, if a researcher has used the McAllister (1995) measure to assess affect-based trust, then that scale is approximately 43 per cent affective, 23 per cent cognitive, 26 per cent other. Thus, this scale appears to offer a broad, non-specific measure of various elements of trust, albeit at varying ratios.

Taken together, when looking across all the scales included in the content analysis, it is perhaps unsurprising that the most heavily represented category is that of cognition. However, it is interesting to note though that very few of the items or scales were unanimously classified as capturing a single dimension. The three dimensions of Mayer and Davis's trustworthiness scale, Gillespie's reliance dimension and the cognitive sub scales of both McAllister (1995) and Yang and Mossholder (2006) are all predominantly cognitive in line with the conceptualizations on which they are based. Similarly, of the 12 Cummings and Bromiley (1996) items, eight were classified by the majority of SMEs as involving a cognitive evaluation. The Mayer and Davis (1999) measure of ability is also largely classified as cognitive although it appears to be somewhat contaminated by the stem for item 4 ('I feel') which carries affective connotations. Also, as noted above, the three sub dimensions of trustworthiness, as measured by Mayer and Davis (1999), have occasionally been used in the empirical literature to capture cognition-based and affect-based trust. For example, Colquitt et al. (2011) use ability and integrity to operationalize cognition-based trust and benevolence (and identification) to operationalize affect-based trust. The classifications provided by the SMEs in our study run contrary to this and their classifications suggest that while some items tapping benevolence are seen as slightly more affective in tone than most ability items; the majority of experts also identify the benevolence items as cognitive evaluations. In fact, the only item in the trustworthiness scale that was classified by more experts as affective rather than cognitive was an item from the integrity scale: 'I like this individual's values'.

Overall our SMEs failed to clearly differentiate between the two bases of trust, suggesting that they are not distinct measures. Specifically, our content analysis suggests that we are not doing a good job of capturing affect-based trust. Given our earlier conceptual critiques, this outcome is unsurprising. The two most used scales specifically dedicated to operationalizing affective bases of trust generated considerable disagreement amongst our experts. Only one item in the Yang and Mossholder (2006) scale was classified by the majority of experts as being affective (I feel secure with this individual because of his/her sincerity) while the others are seen as more cognitive. The McAllister (1995) scale only fares slightly better. Similarly, several items in both these scales that are intended to measure affect-based trust appeared to capture something that is neither affective nor cognitive in nature. The only items in other scales to show promise in capturing more affective evaluations of trust were identified in the Cummings and Bromiley (1996) scale. Specifically three of the items that begin with the stem 'I feel' were classified by the

majority of SMEs as involving an affective evaluation although again, this classification was far from unanimous.

As such, the affective element inherent in trust is not currently being assessed and therefore its impact and the interplay between cognition and affect in the trusting process is overlooked. In contrast, there seems to be a better basis to understand the McAllister measure, and related measures, as capturing different cognitive bases of trust (i.e., as we have argued in our conceptual analysis, about the person versus about the relationship). This is not what we asked SMEs to rate, as our intention is not to recast affect-based trust measures as relationship-based trust measures. Rather, our intention is to highlight the conceptual and methodological problem that what we call affect-based trust in the field is not in fact affect-based trust. The findings of the content analysis would suggest that for the most part, popular multidimensional measures are capturing two cognitive bases of trust, albeit with different foci. To consider the validity of multidimensional conceptualizations further we next examine empirical evidence for the relationship between cognition and affect-based trust and for their distinctiveness.

### **Empirical Studies of Cognition-Based and Affect-Based Trust**

If cognition and affect-based trust represent meaningfully different forms of trust, we should expect this to be supported by indicators of divergent validity and distinct nomological networks in line with those proposed by McAllister (1995). To explore this, we conducted a systematic review of empirical studies as well as a meta-analysis of several key relationships which have attracted significant research attention. We identified articles for inclusion in our review via several steps. First, we reviewed the reference lists of prominent review articles of trust in the workplace (Burke et al., 2007; McEvily and Tortoriello, 2011). In doing so, we aimed to include all scholarly work that set out to capture the affective and/or cognitive dimensions of trust. Second, we searched ProQuest and PsychInfo for English-language papers published prior to May 2021, using keywords relating to cognition- and affect-based trust (i.e., 'affective trust', 'affect-based trust', 'cognitive trust' or 'cognition-based trust'). Third, we searched for 'in press' articles at journals that commonly publish workplace trust articles (e.g., the Journal of Trust Research; Academy of Management Journal and the Journal of Applied Psychology). Primary studies were included if: (i) the measurement of trust included either affect-based, cognition-based or both (ii) reported zero-order correlations, and (iii) was published in a peer reviewed outlet. In total, 169 articles, with 184 independent studies (some articles included multiple studies) met these criteria. A full list of the articles included in our review can be found in Appendix B.

Most of the studies used a field sample of employees with 24 studies presenting data from student populations. Of these 24 samples, 10 concerned MBA (or similar) populations where students were also part of the work force. The trust referents that received the most attention are the leader (89 samples) and teammates or co-workers (58 samples). In comparison, referents at a team (20 samples), organizational (11 samples), top management (3 samples), customer (2 samples), inter-firm (1 sample) or subordinate (3 samples) level were less represented. The study of cognition-based and affect-based trust has been dominated by

the McAllister's (1995) operationalization of trust with 86 per cent of studies reporting that they draw solely on this scale or a derivative of the scale (e.g., Yang and Mossholder, 2010) or the McAllister scale in conjunction with items from another source. This attests to the popularity of the McAllister scale and its widespread uptake in the literature.

We supplemented this wider qualitative review by conducting a meta-analysis of a subset of the initial sample of 184 studies. The purpose of this meta-analysis was to provide quantitative evidence of (a) the relationship between cognition and affect-based trust and (b) to examine and compare the strength of their relationships with frequently measured (i.e., in 4 or more studies) covariates. As such, in the meta-analysis we only included studies which reported measures of both cognitive and affective trust. A study had to meet several further criteria to be included in our meta-analysis: i) it had to include a zero-order correlation between both cognitive and affective trust and one of the relevant variables; ii) the study had to include the sample size used to arrive at the correlation; iii) the sample had to be independent from other studies, if a sample overlapped with another study, it was only included once. In total 106 studies met these criteria and were included in our meta-analysis. The full list of covariates can be seen in Table III and includes a range of attitudinal (e.g., job satisfaction) and behavioural (e.g., job performance) constructs. We also separated our analysis based on commonly used trust referents; trust in leader (61 studies), trust in team/co-workers/peers (39 studies) and trust in top management/organization (3 studies).

Our meta-analysis was conducted in accordance with the guidelines of Hunter and Schmidt (2015). This method creates a sample weighted mean correlation ( $r$ ) and a mean correlation corrected for unreliability in both independent and dependent variables, known as the corrected population correlation ( $\rho$ ). Missing values (i.e., reliability of either predictor or criterion) were estimated based on average value across the studies in which information was provided (Hunter and Schmidt, 2015). The 95% confidence intervals (95% CI) of the sample-weighted mean correlation and the 80% credibility intervals (80% CV) of the corrected population correlation were also calculated. Confidence intervals determine the variability in the sample-weighted mean correlation that is due to sampling error. Furthermore, if the 95% confidence interval does not include zero, we can be confident that the sample-weighted mean correlation is significantly different from zero. Confidence intervals can also be used to judge whether effect sizes differ significantly from one another; effects sizes can be considered different when their confidence intervals are non-overlapping. If the 80% credibility interval of the corrected population correlation is large it indicates there is considerable variation across studies, suggesting moderators are likely to be operating.

*Distinct bases.* In reviewing the literature, we first sought to build on the findings of our content validity study to determine the extent to which cognition and affect-based trust indeed represent distinct variables. We did this through examining the correlations and factor structures reported. It is important to note however that evidence for multidimensionality only indicates that measures tap into different things and does not validate that the content they tap into represents cognitive and affective bases of trust. We first examined the correlations found between cognition-based and affect-based trust. As can be seen in Table III the meta-analytic correlation between cognition-based and affect-based trust is high for all referents; leader ( $\rho = 0.77$ ), team/co-worker ( $\rho = 0.69$ ), and top management/organisation ( $\rho = 0.76$ ). These results support the

Table III. Meta analytic results

Variable	k	N	r	95% CI		SD <sub>ρ</sub>	80% CI	
				Lower	Upper		Lower	Upper
Affect-Cognitive Trust Referents								
Leader	61	14819	0.67	0.64	0.70	0.12	0.62	0.92
Team/Co-workers/Peers	39	7667	0.59	0.54	0.64	0.15	0.50	0.89
Top Management/Organization	3	1038	0.66	0.43	0.90	0.19	0.52	1.00
Procedural Justice								
Affect-based Trust	9	2886	0.60	0.51	0.69	0.14	0.51	0.87
Cognition-based Trust	9	2886	0.60	0.52	0.69	0.11	0.56	0.84
Interactional/Interpersonal Justice								
Affect-based Trust	4	1428	0.62	0.47	0.78	0.17	0.47	0.90
Cognition-based Trust	4	1428	0.64	0.52	0.76	0.14	0.52	0.87
LMX								
Affect-based Trust	5	1048	0.60	0.45	0.75	0.16	0.47	0.88
Cognition-based Trust	5	1048	0.58	0.46	0.70	0.13	0.48	0.80
Affective Organizational Commitment								
Affect-based Trust in Leader	12	3083	0.49	0.43	0.56	0.12	0.41	0.71
Cognition-based Trust in Leader	12	3083	0.41	0.35	0.48	0.11	0.33	0.62
Job Satisfaction								
Affect-based Trust in Leader	6	1432	0.37	0.31	0.43	0.06	0.36	0.53
Cognition-based Trust in Leader	6	1432	0.34	0.28	0.39	0.03	0.38	0.45
(Continues)								

(Continues)

Table III. (Continued)

Variable	<i>k</i>	<i>N</i>	<i>r</i>	95% <i>CI</i>		<i>SD</i> <sub>ρ</sub>	80% <i>CV</i>	
				<i>Lower</i>	<i>Upper</i>		<i>Lower</i>	<i>Upper</i>
<b>In-Role Job Performance</b>								
Affect-based Trust in Leader	15	4019	0.22	0.18	0.25	0.05	0.18	0.31
Cognition-based Trust in Leader	15	4019	0.19	0.15	0.24	0.08	0.12	0.33
<b>Extra-Role Job Performance (OCB)</b>								
Affect-based Trust in Leader	11	2547	0.34	0.27	0.41	0.11	0.25	0.52
Cognition-based Trust in Leader	11	2547	0.23	0.17	0.30	0.10	0.14	0.39
<b>Team Performance</b>								
Affect-based Trust	13	1397	0.36	0.26	0.45	0.20	0.15	0.67
Cognition-based Trust	13	1397	0.45	0.36	0.55	0.19	0.28	0.76
<b>Knowledge Sharing</b>								
Affect-based trust in co-workers/team	11	3654	0.43	0.32	0.54	0.21	0.25	0.79
Cognition-based trust in co-workers/team	11	3654	0.36	0.24	0.48	0.22	0.16	0.73

*Note:* Results are corrected for criterion and predictor unreliability. *k* = number of correlations; *N* = number of respondents; *r* = sample weighted mean correlation; *ρ* = corrected population correlation; *SD<sub>ρ</sub>* = standard deviation of the corrected population correlation; 95% CI = 95% confidence interval around the sample weighted mean correlation; 80% CV = 80% credibility interval around the corrected population correlation.

findings from previous meta-analyses reporting that the correlation between the two bases of trust is generally very high for team trust ( $r = 0.76$ ; De Jong et al., 2016) and trust in the leader ( $r = 0.79$ , Legood et al., 2021). Overall, such consistently high correlations suggest that the two bases may lack empirical distinctiveness and that issues of multicollinearity may be present.

Correlations can provide some indication of the distinctiveness of cognition-based and affect-based trust, but further evidence comes from goodness of fit indices for measurement models that compare a unidimensional trust model to a two-dimensional model of cognition-based and affect-based trust. Only a few papers in our sample reported such models. In support, Lu (2014) and Chen et al. (2021) report acceptable fit of a two-factor trust model, but do not present model comparison information comparing a nested one-factor model of trust. Camgöz and Karapinar (2016) and Lei et al. (2018) compare nested models using trust in the leader data and report that the two-factor model demonstrates better fit. Similarly, Chua et al. (2009) report a two-factor model is a better fit for their data on trust in professional network contacts. Interestingly, Webber (2008a) reports that a unidimensional model is a significantly better fit when trust in teammates is measured three weeks following team formation, but that a two-dimensional model demonstrates a better fit five weeks later. All of these papers report using the McAllister scale or a derivative. While these papers provide some support for the two-dimensional structure, many papers collapse cognition-based and affect-based trust into a single dimension without indicating why this decision was made (e.g., Davis and Bryant, 2010; Mach and Baruch, 2015).

*Differential nomological networks.* If affect-based and cognition-based trust are distinct then one would expect to see differences in their nomological networks. Studies have investigated the impact of cognition-based and affect-based trust on a variety of outcomes. Importantly, while theoretically these variables are positioned as outcomes, the vast majority of studies is cross-sectional in nature and causality cannot be inferred from these (we also briefly review the limited causal evidence below and return to study design issues in the discussion). Our review found the most frequently measured 'behavioural' outcomes to be in-role and extra-role performance. Another behavioural outcome measured relatively frequently in relation to trust in teammates/co-workers was knowledge sharing. Many studies also focused on the link between cognition-based and/or affect-based trust and employee attitudes, in particular, job satisfaction and (affective) organizational commitment. Other common correlates include LMX and organizational justice (i.e., procedural, and interpersonal). Most pertinent to the current review is whether there are differential associations between these variables and cognition and affect-based trust. Put differently, is there evidence that either trust base has stronger association with any of these variables?

Interestingly, our review demonstrates that cognition and affect-based trust have inconsistent effects on the variables measured across individual studies. For instance, some studies showed that only affect-based trust was associated with performance (e.g., Eva et al., 2019; Fryxell et al., 2002; Lu and Hao, 2013; Miao et al., 2014; Webber, 2008b; Yang and Mossholder, 2010; Zhu et al., 2013). Conversely, some studies showed the opposite, with only cognition-based trust demonstrating an association

with performance (Chou et al., 2006; Yang et al., 2009; Zhu and Akhtar, 2014b). Our meta-analysis (see Table III) provides clarity as to the overall effect sizes and cognition and affect-based trust have markedly similar associations with the covariates included in the analysis. Take, for example, in-role performance; both affect-based and cognition-based trust show similar associations with this variable ( $p = 0.25$  and  $p = 0.22$ , respectively). Similarly, the association between procedural justice and cognition-based trust ( $p = 0.69$ ) is almost identical to that with affect-based trust ( $p = 0.68$ ). Indeed, as evidenced by the overlapping 95% confidence intervals, no significant differences were found in the relationship between *any* of the correlates and affect-based or cognition-based trust. Thus, to date there is no evidence that cognition-based trust and affect-based trust demonstrate differential associations with the correlates included in this meta-analysis.

As a final point we also examined the causal evidence for how trust bases interact. We identified eight papers that aimed to investigate the causal relationship between them and that suggest that cognition-based trust predicts affect-based trust in vertical (Newman et al., 2014, 2016; Schaubroeck et al., 2011) and horizontal (Jiang et al., 2017) relationships. Using a longitudinal design, Webber (2008a) reports that early trust appears to be unidimensional and the affective base of trust emerges once team members have had a chance to demonstrate relationship building citizenship behaviours. In contrast however, one experimental study paints a potentially different picture. Using a different operationalization, Olekalns and Smith (2005) measure cognition-based and affect-based trust pre and post a simulated negotiation exercise with MBA students and found evidence to suggest that cognition-based trust builds incrementally as a result of interaction during the negotiation, while affect-based trust forms more rapidly and provides a lens through which the negotiation is viewed. In sum, the causal evidence on potential interactions between the trust bases is mixed and still rather limited to date.

## Conclusions of the Measurement and Empirical Review

Taken together, the findings of the content analysis, empirical review and meta-analysis lead us to the conclusion that cognition and affect-based trust are too similar to be treated as distinct bases of trust. The high meta-analytical correlation between the subdimensions and the absence of clear evidence for different nomological networks are particularly problematic. Much of the evidence reviewed is supportive of our conceptual critique, in that we would expect the empirical data to be at least as well understood from the perspective of a person-based versus relationship-based trust distinction as from a cognition-based versus affect-based trust distinction. For example, as different cognitive bases would inevitably overlap because the person is part of the relationship and the relationship is a source of information about the person, the high correlations frequently observed within the literature are more consistent with this former view than with the latter.

A second thing to note is that the weak evidence that affect-based trust may be more strongly related to outcomes than cognition-based trust – even when not unequivocal – is well-understood from the perspective that these measures capture person-based versus relationship-based trust. Trust, after all, is relational; it captures one's willingness to be

vulnerable to the other and cannot be seen as a judgment about the other independent of self. From that perspective, one would expect that relationship-based trust is more strongly related to outcomes than person-based trust. Potentially a case can be made that trust more clearly based on affect (or more affective in tone) is more predictive than trust based on cognition. This however is a case that has not been made in the literature, nor a case that would as easily be envisioned as the case for greater predictive power of relationship-based trust.

### **Combined Summary of the Theoretical and Empirical Review**

While new labels for these trust bases may be a step closer to resolving the conceptual issues identified, we propose that just relabelling affect as relational-based trust is not sufficient as a solution. Most critically, this is because our meta-analysis has provided empirical support that the measures do not capture sufficiently distinct variables. As such the use of the dominant operationalization of cognition and affect-based trust is problematic, regardless of the accuracy of the labels used. Considerable further theorizing and work is needed to move forward with conceptualizing and capturing these bases of trust. Even if we were to accept that both bases of trust are driven by a subset of cognitions; one of the person and the other the relationship, such a dichotomy is still not correct or complete for three key reasons. First, in our view, the way in which affect-based trust (or relationship-based trust) is currently captured does not cover all we should be asking about relationship-based trust if that is what is intended to be captured. For instance, recent theoretical work suggests that the social functions of a relationship are an important determinant of trust (van der Werff et al., 2019) something that is not currently accounted for in our empirical measures. Second, current operationalizations of cognition-based trust do not reflect the full range of cognitions about another party that may be relevant to trust (e.g., Dietz and Den Hartog, 2006). Either researchers need to more accurately capture the full range of cognitions (so to retain the label cognition-based trust) or consider a renaming of the base as person-based trust. Finally, if we accept that the current affect-based trust measures capture relationship-based trust, then we currently do not yet capture the highly relevant role of *affect* in trust. We expand on the importance of this oversight in the discussion.

## **DISCUSSION**

Our primary aim in conducting this review has been to critically examine the theoretical and empirical basis for the distinction between cognition and affect-based trust. To summarize, the items forming the affect-based trust measure offered by McAllister (1995) center around emotional bonds, and expectations of interpersonal care and concern which are in line with the definition provided. Both the definition and items however, for the most part, lack actual affective content or explicit reference to emotions. The conclusion here cannot simply be that we now move on to using these measures and conceptualizations with a new naming convention – e.g., person-based versus relationship-based trust. Such a new interpretation would require a reconsidering of the conceptualizations of the concepts as well as of their measurement – and as per the high intercorrelations between measures found in our meta-analysis as well as the unclear focus of the items demonstrated in our review of the measures, there

are real issues here. Hence, we suggest this is not the solution. The field also requires a rethinking of the conceptualization and measurement of the affective basis of trust. The combined conclusion of these sections is that the field of trust research can be better advanced by accepting the conclusion that current theory and measurement of cognition and affect-based trust are restricting the development of our understanding of these concepts. Our advice would be to not continue using the current measures for these constructs and to rather go back to the conceptual and measurement 'drawing board'. Most worryingly perhaps our review shows current measures do not capture affect-based trust as trust based on affect – that is feelings, moods and emotions. We thus know very little about affect-based trust if we follow our definition of this as being trust informed by emotions and moods. Given that emotions and moods are highly likely to affect the willingness to be vulnerable (i.e., trust), this clearly needs much more theorizing and research. In the following section, we offer avenues for future research which could look to more accurately capture these processes of trust.

### **Bases or Dimensions of Trust?**

Our review of the empirical literature suggests that the predominant multidimensional conceptualization of trust is beset by considerable issues around the distinctiveness of the dimensions themselves as well as their antecedents and consequences. This view was supported by the findings of the meta-analysis. Further, the literature remains unclear on whether trust is best viewed as multidimensional or whether the (somewhat) different cognitions involved in cognition-based and affect-based trust are better viewed as proximal antecedents of trust. Looking at the conceptual argumentation as well as empirical findings, we strongly support the view of trust as unidimensional, closely linked to multidimensional antecedents of trust that (among other things) have cognitive and affective content. We suggest that the literature would benefit from unifying around the view of trust as a unidimensional construct characterized by the willingness to be vulnerable, which can be informed by both affective and cognitive influences. Thus, we advocate for moving away from the view of trust itself as being multidimensional.

In line with this, we propose that future research in this field discusses the *bases* rather than the *dimensions* of trust. The use of the term *base* implies that the trust is unidimensional but can have different foundations. In contrast, the use of the term *dimension* implies that the nature of trust itself can vary. Early conceptualizations of cognition-based and affect-based trust have described a concept consistent with the term *base* but have not clearly differentiated (or operationalized) these bases as distinct from trust as a willingness to be vulnerable. Consistent with the work of Mayer et al. (1995), we believe that trust bases should be considered proximal antecedents of (unidimensional) trust although we urge future researchers to consider a broader range of bases than those portrayed in rational choice models of trust. We also encourage future researchers to more deeply consider the volitional elements associated with this willingness and consider how trust moves us past a rational consideration of trust cues to consider the aspects of that willingness which entail choice, commitment and motivation (Li, 2007; van der Werff et al., 2019) as well as of how affect can play a role.

Our discussion of whether cognition and affect-based trust should be described as bases or dimensions is not simply a matter of semantics. If cognition and affect form different bases of trust, and trust is unidimensional, there is no expectation that different bases of trust would lead to different outcomes other than in terms of their influence on trust. For example, if affective influences have a stronger effect on trust then they would have a stronger effect on the outcomes of trust, as mediated by trust. That is, any differences in relationships with outcomes for cognitive and affective bases of trust would be a matter of degree and would not reflect qualitative differences. In contrast, if these are different dimensions of trust, and trust based on cognition is different from trust based on affect, there could be a case for qualitative differences in effects (e.g., cognitive trust consistently predicting some outcomes that affective trust would not predict and vice versa). We, however, did not find evidence for this.

### **The Interplay of Cognitive and Affective Bases of Trust**

The view that affect-based trust takes longer to develop than that of cognition-based trust is popular. As discussed however, there is limited empirical support relating to the interacting nature of the bases as proposed by McAllister (1995) and other prominent trust models (e.g., Lewicki and Bunker, 1996; Rousseau et al., 1998). Given that the conceptualization of affect-based trust is better interpreted as cognition about the relationship, it is not surprising that it is informed by cognitions about the person or that trust based on this information should typically take longer to develop as most of that limited evidence suggests.

We propose however that a shift in research focus to examine antecedents of trust which are driven by actual affect, such as moods and discrete emotions, is likely to contradict the assertion that cognitive influences would precede affective. Indeed, affect research has actually argued for the ‘primacy of affect’ (Zajonc, 1984) in which affect is understood to exert its influences much faster than cognition (Damasio, 1994). Rather than seeing what was called affect-based trust (i.e., relationship-based trust) as slower to develop than trust based on cognition, we suggest there is a case to study temporal dynamics with the *reverse* prediction: affective influences on trust should act faster than cognitive influences on trust. Theoretical constructs (e.g., Kramer, 1999; Kramer and Lewicki, 2010) and empirical evidence (e.g., Willis and Todorov, 2006) that suggest trust can arise in a really short period of time may then capture affective influences more than cognitive influences. Preliminary support for this can be seen in a qualitative study of a Chinese entrepreneurial network where early relationships appeared to rely more heavily on affective than cognitive bases of trust (Wang et al., 2019).

Consistent with these observations, a small number of theorists have argued that the interplay between affect and cognition in trust is a more pervasive and ongoing process relevant to all relationships at all stages. For instance, Jones and George (1998) contend that emotion and trust influence subsequent cognitive trust judgments by providing information on which they can be based, biasing the processing of other available information, and providing signals that trust levels need to be updated. Williams (2001) critiques the traditional ‘stage models’ of trust for neglecting the possibility that trust is influenced by affective processes

in immature or shallow relationships as much as in deeper relationships. She proposes an affective-cognitive model of trust in dissimilar social groups that positions affect as a key antecedent of cognitive elements of trust.

Further theoretical development is needed to fully explore the interplay between cognitive and affective influences on trust. This can be guided by developments in related fields where existing theories can provide a framework for understanding how cognition and affect-based trust might interact over time. For instance, research has increasingly recognized the importance of affective processes such as emotion and mood in influencing judgment and decision making (Healey and Hodgkinson, 2017). Thus, mood and emotion are also likely to affect the cognitive judgments made about another person that affect the willingness to be vulnerable to them. Similarly, in the study of information processing rational, controlled processing is often conceptualized as running simultaneously with emotional and heuristic processing with evidence for crossover between the two systems (Evans, 2008). Dual process perspectives on trust have highlighted the potential for trust decisions to be influenced by cues that would not be considered as part of a rational, systematic decision-making process (e.g., Baer et al., 2018). Indeed, Li (2015) argues that rational 'System 2' trust decisions are predominantly cognitive and likely to result in weaker trust than those which involve 'System 1' heuristics and affective cues. In summary, we propose that the processes through which affective and cognitive bases of trust interact are likely to be far less straightforward than current conceptualizations suggest. We explore some of these ideas in more detail in our section below on reconsidering the role of affect.

### **Reconsidering the Role of Cognition and its Influence on Trust**

If we accept that there is value in the distinction between a cognitive and an affective basis for trust and that the current literature does not sufficiently capture this distinction, how can we proceed to understand more about these bases? A first important conclusion here is that research should reconsider the use of the current scales to measure cognition and affect-based trust in the face of the conceptual, empirical, and content-analytical considerations identified in this review. As noted, we suggest not moving forward with these measures. Our conceptual consideration regarding the role of affect in trust also suggests, however, that it may not be realistic to develop measures of affect-based trust and cognition-based trust as distinct forms of trust. Rather research efforts may be more effective if we were to look at more nuanced ways to consider both of these bases of trust and their interplay.

To fully understand cognitive antecedents to trust, a far broader range of cognitions need to be considered. A body of research exists examining trustworthiness assessments as a primary predictor of trust (Baer and Colquitt, 2018); however, there are likely to be a wider range of cognitions relevant which extend beyond a consideration of the trustee and their actions and intent. For example, the cognitions of the trustor in terms of the function a relationship fulfills for them may serve as important predictors of subsequent trust (van der Werff et al., 2019). These theoretical predictions are in line with an increasing recognition in more macro, impersonal trust research that interactions with other parties are influenced by motivation and enjoyment (Bundy et al., 2018; Venkatesh et al., 2012). Motivational drivers can also be extrinsic such as the consideration of how much one stands to gain from a relationship (e.g., van der

Werff et al., 2019). Although cognitions about the relationship are covered to an extent within the current affect-based trust measure, motivational drivers of trust have been largely overlooked in the interpersonal trust literature.

Similarly, cognitions about the wider context have been considered predominantly in the study of early trust relationships (e.g., Kramer and Lewicki, 2010) but far less in their role in established relationships, despite a general consensus that context plays a critical role in influencing organizational behaviour (Johns, 2017; Rousseau and Fried, 2001). Recent theoretical developments propose that changes in the external environment are likely to be influential in motivating trustors to reevaluate their willingness to be vulnerable (van der Werff et al., 2019) and this is likely to be a fruitful avenue for future empirical research.

### **Reconsidering the Role of Affect and Its Influence on Trust**

In terms of affect, research needs to fully engage with the role emotions and moods themselves play in determining trust. Researchers in other fields have made great strides in understanding the role emotions play in influencing behaviour, attitudes, cognitions and decisions in the work context and beyond (Ashkanasy and Dorris, 2017; Lerner et al., 2015). Emotion researchers have argued that emotion is an interpersonal phenomenon (e.g., Elfenbein, 2007) but, perhaps influenced by the issues inherent in the dominant conceptualisation of affect-based trust, trust researchers have yet to integrate emotion and affect into the mainstream trust literature. Affective antecedents of trust might operate through multiple pathways. Here, we draw on the work of Lerner et al. (2015) to highlight five ways in which affect is likely to influence trust and, as such, open new avenues for future theorising and empirical work on this much neglected topic. The pathways we propose also highlight the need for a more dynamic approach in addressing how affect and cognition jointly affect trust, rather than the currently mostly static empirical consideration of cognition and affect based trust.

The first two pathways through which affect might act as a basis for trust are relatively straightforward and operate through the influence of integral and incidental emotions. Incidental emotions are those which exert an influence despite being unconnected to the decision itself and have typically carried over from another situation (Keltner and Lerner, 2010). For example, I am happy, so I feel I can trust you. That is, how we feel influences our judgments and decisions even when our feelings are not specifically related to the judgment (Forgas, 1995). The role of incidental affect in trust has received experimental support (Dunn and Schweitzer, 2005; Gino and Schweitzer, 2008; Lount Jr, 2010). In contrast, integral emotions arise specifically from decisions (Damasio, 1994) and in the case of trust this affect likely arises from how the referent of trust makes us feel. For example, you make me feel happy, so I feel I can trust you. In essence, work relationships that create positive emotions for us (e.g., happiness, gratitude) are ones in which we are more likely to willingly accept vulnerability and to trust. This idea is in line research that demonstrates the importance of emotion in processes related to affiliation and cooperation (Frederickson, 1998; Keltner et al., 2006). In summary, theory for both incidental and integral affect

suggests a relatively straightforward expectation that more positive moods and emotions would be associated with higher trust, especially when the mood or emotion is associated with the trustee.

In the remaining pathways we highlight we move beyond the current trust literature and the concept of affect-congruent trust judgments and draw on theory regarding how affect influences judgment and decision making more generally (for a review see Lerner et al., 2015). Specifically, the third avenue for exploring the role of affect in trust relates to how affect shapes the content of our thoughts. Over the last few decades, developments in the affect literature show the need to move beyond over simplified categorizations of affect as being positive or negative and to more fully consider the role of discrete emotion and ways in which emotions differ beyond simple valence (Lerner and Keltner, 2000; Mellers et al., 1998; Methot et al., 2017). Lerner and Keltner (2000) suggest that specific emotions can be classified according to dimensions of appraisals including certainty, pleasantness, attentional activity, anticipated effort, control and responsibility (Lerner and Keltner, 2000). In line with this, affective experiences like anger or gratitude would be classified differently according to pleasantness but both would involve high levels of other's responsibility that would likely bias attributions of events to causes intrinsic to the trustee and thus influence trust related judgments.

The implications of this are particularly interesting in the context of trust repair and the fluctuations in trust that characterize ongoing professional relationships. Trust repair theory has started to consider the role of integral emotions as a response to the causal attributions arising from trust violation (e.g., Tomlinson and Mayer, 2009). In particular, experiences of anger can be expected when the attributions made for a trust violation are stable and controllable while unstable causes lead to reactions like fear (Tomlinson and Mayer, 2009). However, affective experiences preceding the violation are also likely to act as a lens through which trust breaches are interpreted. Affect and emotion influence processes like interpersonal trusting by focusing the trustor on a 'partial field of evidence' (Jones, 1996, p. 11). As such, relationships between causal attributions of trustee behaviour and affect are likely to be reciprocal. Building on this, we argue that certain emotions have a protective effect preserving trust in the face of threat (Gustaffson et al., 2021), while other emotions may act to exacerbate the impact of breaches. The pattern of effects we might expect is likely to be nuanced in line with the totality of appraisals that emotions evoke and extend beyond whether they are positive or negative (Lerner et al., 2015). For example, emotions such as pride are thought to induce a focus on long term benefits and an increased acceptance of short-term costs (DeSteno, 2009), which would influence the calculative processes often theorized to underlie trust in early stage or shallow relationships (Lewicki and Bunker, 1996). Interestingly, in transformational models of trust development, calculus-based trust is typically portrayed as the earliest and most rational stage of trust development (Lewicki et al., 2006; Rousseau et al., 1998). We challenge this assumption and propose that emotion is likely to shape the content of trust cognitions at all stages of relationship development.

The fourth pathway through which affect is likely to play a role in trust processes is by shaping the depth of our information processing with regard to trust related cues. One of the key functions of affect is as an adaptive tool that signals when a situation or decision requires vigilance and attention (Lerner et al., 2015). While emotions high on certainty,

such as happiness and anger, signal safety and are associated with more heuristic processing, uncertain emotions such as fear or surprise signal threat and motivate a switch to more effortful, systematic processing (Tiedens and Linton, 2001). Empirical evidence suggests that situational normality is a powerful predictor of trust in organizations (Baer et al., 2018) and as such we expect that affective experiences high on certainty which induce this feeling will be influential in the processing and interpretation of trust related information. In addition to influencing the processing of trust related information the impact of affect appraisals related to certainty are likely to play a role in the impact of trust itself. A growing body of literature has recognized the potential for trust to act as a heuristic that reduces complexity in our interactions with others (McEvily, 2011; Lewicki and Brinsfield, 2011). The broader literature on the role of emotion in decision making suggests that the extent to which this is likely to be the case may differ depending on the affective experiences of the trustor at that time. For instance, trust might be more likely to be used as a heuristic for guiding interpersonal interaction in situations where trustors feel happy or angry than in situations where they feel anxious or afraid.

Finally, affect influences trust and interpersonal decision making more generally by providing us with social information that is information about the other party's motivations and character. Perception of the trustee's emotion can act as a direct antecedent of decisions through emotion contagion processes that elicit congruent or non-congruent emotions in the trustor. Emotions as Social Information (EASI; van Kleef, 2014) theory labels this process an affective reaction to another's emotion. In general, this process is portrayed by EASI as being more heuristic with the potential to influence decisions through affective infusion (Forgas, 1985) or selective priming of positive or negative person perceptions (Bower, 1981; van Kleef, 2014). Recent qualitative research supports this view with evidence that in high dependency contexts when trust is socially embedded and based on affective drivers, trustors may actively avoid cognitive calculations of trustworthiness in an effort to protect relationships (Hamill et al., 2019).

In contrast, the second process specified by EASI suggests that perception of a trustee's emotion provides the trustor with inferential cognitive information about the intentions (Fridlund, 1994) and affiliative orientation (Hess et al., 2000) of the trustee. As such, this is likely to provide information about dimensions of trustworthiness, which as noted forms a cognitive precursor to trust (Mayer et al., 1995). Indeed, there is evidence that the emotions someone displays influence observers' perceptions of that person's competence (Melwani et al., 2012). Furthermore, Shao (2019) provides tentative support for leader emotional displays acting as a cue for subordinate perceptions of integrity in a similar way to the provision of verbal feedback. The issue thus is not just the influence of one's own affect, but also the influence of others' affect, and affect may influence the trustor not only via a process of affect-congruent judgment, but also via a process of cognitive interpretation (van Knippenberg and Van Kleef, 2016).

Taken together the variety of pathways through which affect can influence trust processes not only underscores the potential for the study of affective influences on trust, but also shows that the issue is more complex than a distinction between affect and cognition. Affect may influence trust through an affective route, but also via a cognitive route (e.g., Melwani et al., 2012). It may be more appropriate then, to think of the intertwined role of affect and cognition as influencing trust, and to abandon the goal to clearly delineate affect-based and

cognition-based trust (e.g., if affect leads to competence judgments that influence trust, is this affect-based or cognition-based trust?). Trust research is yet to fully engage with these issues, but the processes we outline here highlight clear avenues for exploration and a promise for the development of our understanding of affective influences on trust.

### Improvements in Study Design

While our review shows that the way in which cognition-based and affect-based trust is currently conceptualized and measured is problematic, we argue that advancing our understanding of affective trust processes and their cognitive counterparts is not solely an issue of revisiting our theories or developing new measures. The definitional and operational issues we have discussed are confounded by a number of additional methodological issues which, while not exclusive to the study of trust, have significantly hampered our ability to understand these concepts. Importantly, more accurate and rigorous measures may still fail to detect important nuances in the distinction between these constructs if researchers are not mindful of the importance of study design in advancing our understanding in the field.

Every study of cognition-based and affect-based trust within our sample was concerned with evaluating causal effects. However of the 184 studies, 146 relied on cross-sectional designs and a further 26 studies utilized time-lagged data. Only two studies used longitudinal methods and four were qualitative. The remaining 12 studies were experimental. Thus, the majority of studies of cognition and affect-based trust hinge on research designs which are not able to demonstrate causal linkages between variables. This is clearly problematic, given that the impact of both cognitions and affect on trust involve a dynamic process as highlighted above. As we understand little about the role of affect yet, qualitative research might help develop this insight. Also, the robustness of quantitative field studies of cognitive and affective influences on trust can be improved through the use of experimental as well as longitudinal, repeated measures designs and the identification of instrumental variables to control for endogenous variance. Endogeneity can occur when a variable that has been omitted from measurement may predict both the independent and dependent variable in a given model (see Antonakis et al., 2010). For example, trust does not vary randomly in organizations. It depends on some factors that may stem from the leader, the follower, and the organization, which may correlate with a supposed outcome of trust. If such factors are omitted from research models, and if they predict the outcome in addition to trust, then the effects of trust on the outcome cannot be correctly estimated. In our sample, we found only four studies that used cross-lagged designs to explore the effects of cognition and affect-based trust (e.g., Kaltiainen et al., 2017) and none used the instrumental variable approach.

### CONCLUSION

Our field has made considerable strides since the seminal trust theory of the mid 1990s. In its time, this work provided important leaps forward in our understanding of trust and its proximal antecedents; however, the limitations of this theory have been restrictive in narrowing the focus and ambitions of trust researchers. While the impetus for understanding the bases of trust and their differential impacts is clear, we argue that

current conceptualisations of cognition and affect-based trust are problematic both theoretically and empirically. Scholarly work which builds on these shaky foundations does not do justice to the constructs. Our critical review and meta-analysis demonstrates that researchers seeking to study affect-based trust should not use the McAllister (1995) definitions or scales as they do not adequately capture a distinction between cognitive and affective bases for trust. There is little doubt that affect is important to trust processes. If however we truly want to understand more about the role of affect, we need to move away from traditional conceptualizations of cognition and affect-based trust and see this field as wide open for contribution and new theorizing. As such, our paper is intended to provide a rallying call to trust researchers to embrace this opportunity and study the role of affect – moods and emotions – in trusting processes. Theory on affect and trust is far more nascent than it may initially seem and we call on the field to invest in theory building and empirical work using a range of methodological approaches so that we can begin to understand the role that affect plays in trust judgments.

## REFERENCES

- American Psychological Association (APA). (2020). *Publication Manual of the American Psychological Association*, 7th edition. Washington: American Psychological Association. doi:10.1037/0000165-000
- Antonakis, J., Bendahan, S., Jacquart, P. and Lalive, R. (2010). 'On making causal claims: A review and recommendations'. *Leadership Quarterly*, **21**, 1086–120.
- Ashkanasy, N. M. and Dorris, A. D. (2017). 'Emotions in the workplace'. *Annual Review of Organizational Psychology and Organizational Behavior*, **4**, 67–90.
- Ashkanasy, N. M., Humphrey, R. H. and Huy, Q. N. (2017). 'Integrating emotions and affect in theories of management'. *Academy of Management Review*, **42**, 175–89.
- Baer, M. and Colquitt, J. A. (2018). 'Moving toward a more comprehensive consideration of the antecedents of trust'. In Searle, R. H., Neinaber, A. M. and Sitkin, S. B. (Eds), *Routledge Companion to Trust*. Abingdon: Routledge, 163–82.
- Baer, M. D., Van Der Werff, L., Colquitt, J. A., Rodell, J. B., Zipay, K. P. and Buckley, F. (2018). 'Trusting the "look and feel": Situational normality, situational aesthetics, and the perceived trustworthiness of organizations'. *Academy of Management Journal*, **61**, 1718–40.
- Barsade, S. G. and Gibson, D. E. (2007). 'Why does affect matter in organizations?' *Academy of Management Perspectives*, **21**, 36–59.
- Bigley, G. A. and Pearce, J. L. (1998). 'Straining for shared meaning in organization science: Problems of trust and distrust'. *Academy of Management Review*, **23**, 405–21.
- Bower, G. H. (1981). 'Mood and memory'. *American Psychologist*, **36**, 129–48.
- Bundy, J., Vogel, R. M. and Zachary, M. A. (2018). 'Organization–stakeholder fit: A dynamic theory of co-operation, compromise, and conflict between an organization and its stakeholders'. *Strategic Management Journal*, **39**, 476–501.
- Bunker, B. B., Alban, B. T. and Lewicki, R. J. (2004). 'Ideas in currency and OD practice has the well gone dry?' *Journal of Applied Behavioral Science*, **40**, 403–22.
- Burke, C. S., Sims, D. E., Lazzara, E. H. and Salas, E. (2007). 'Trust in leadership: A multi-level review and integration'. *Leadership Quarterly*, **18**, 606–32.
- Camgöz, S. and Karapinar, P. (2016). 'Linking secure attachment to commitment: Trust in supervisors'. *Leadership and Organization Development Journal*, **37**, 387–402.
- Chen, X., Peng, J., Lei, X. and Zou, Y. (2021). 'Leave or stay with a lonely leader? An investigation into whether, why, and when leader workplace loneliness increases team turnover intentions'. *Asian Business and Management*, **20**, 280–303.
- Chou, L. F., Cheng, B. S., Huang, M. P. and Cheng, H. Y. (2006). 'Guanxi networks and members' effectiveness in Chinese work teams: Mediating effects of trust networks'. *Asian Journal of Social Psychology*, **9**, 79–95.
- Chua, R. Y., Morris, M. W. and 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**, 490–508.

- Colquitt, J. A., Baer, M. D., Long, D. M. and Halvorsen-Ganepola, M. D. (2014). 'Scale indicators of social exchange relationships: A comparison of relative content validity'. *Journal of Applied Psychology*, **99**, 599–618.
- Colquitt, J. A., LePine, J. A., Zapata, C. P. and Wild, R. E. (2011). 'Trust in typical and high-reliability contexts: Building and reacting to trust among firefighters'. *Academy of Management Journal*, **54**, 999–1015.
- Cummings, L. L. and Bromiley, P. (1996). 'The organizational trust inventory (OTI): Development and validation'. In Kramer, R. N. and Tyler, T. R. (Eds), *Trust in Organizations*. Thousand Oaks, CA: Sage, 302–30.
- Damasio, A. R. (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Grosset/Putnam.
- Davis, D. D. and Bryant, J. L. (2010). 'Leader-member exchange, trust, and performance in national science foundation industry/university cooperative research centers'. *Journal of Technology Transfer*, **35**, 511–26.
- De Jong, B. A., Dirks, K. T. and Gillespie, N. (2016). 'Trust and team performance: A meta-analysis of main effects, moderators, and covariates'. *Journal of Applied Psychology*, **101**, 1134–50.
- DeSteno, D. (2009). 'Social emotions and intertemporal choice: "Hot" mechanisms for building social and economic capital'. *Current Directions in Psychological Science*, **18**, 280–84.
- Dietz, G. (2011). 'Going back to the source: Why do people trust each other?'. *Journal of Trust Research*, **1**, 215–22.
- Dietz, G. and den Hartog, D. N. (2006). 'Measuring trust inside organizations'. *Personnel Review*, **35**, 557–88.
- Dunn, J. R. and Schweitzer, M. E. (2005). 'Feeling and believing: The influence of emotion on trust'. *Journal of Personality and Social Psychology*, **88**, 736–44.
- Elfenbein, H. A. (2007). 'Emotion in organizations: A review and theoretical integration'. *Academy of Management Annals*, **1**, 315–86.
- Erdem, F. and Ozen, J. (2003). 'Cognitive and affective dimensions of trust in developing team performance'. *Team Performance Management: An International Journal*, **9**, 131–35.
- Eva, N., Newman, A., Miao, Q., Cooper, B. and Herbert, K. (2019). 'Chief executive officer participative leadership and the performance of new venture teams'. *International Small Business Journal*, **37**, 69–88.
- Evans, J. S. B. (2008). 'Dual-processing accounts of reasoning, judgment, and social cognition'. *Annual Review of Psychology*, **59**, 255–78.
- Forgas, J. P. (1985). *Interpersonal Behaviour: The Psychology of Social Interaction*. Oxford: Pergamon Press.
- Forgas, J. P. (1995). 'Mood and judgment: The affect infusion model (AIM)'. *Psychological Bulletin*, **117**, 39–66.
- Forgas, J. P. (2008). 'Affect and cognition'. *Perspectives on Psychological Science*, **3**, 94–101.
- Fredrickson, B. L. (1998). 'What good are positive emotions?' *Review of General Psychology*, **2**, 300–19.
- Fridlund, A. J. (1994). *Human Facial Expression: An Evolutionary View*. San Diego, CA: Academic Press.
- Frijda, N. H. (1986). *The Emotions*. Cambridge: Cambridge University Press.
- Fryxell, G. E., Dooley, R. S. and Vryza, M. (2002). 'After the ink dries: The interaction of trust and control in US-based international joint ventures'. *Journal of Management Studies*, **39**, 865–86.
- Fulmer, C. A. and Gelfand, M. J. (2012). 'At what level (and in whom) we trust: Trust across multiple organizational levels'. *Journal of Management*, **38**, 1167–230.
- Gillespie, N. (2003). 'Measuring trust in working relationships: The behavioral trust inventory'. Academy of Management Conference, Seattle, WA.
- Gino, F. and Schweitzer, M. E. (2008). 'Blinded by anger or feeling the love: How emotions influence advice taking'. *Journal of Applied Psychology*, **93**, 1165–73.
- Gustafsson, S., Gillespie, N., Scarle, R., Hope Hailey, V. and Dietz, G. (2021). 'Preserving organizational trust during disruption'. *Organization Studies*, **42**, 1409–33.
- Hamill, H., Hampshire, K., Mariwah, S., Amoako-Sakyi, D., Kyei, A. and Castelli, M. (2019). 'Managing uncertainty in medicine quality in Ghana: The cognitive and affective basis of trust in a high-risk, low-regulation context'. *Social Science and Medicine*, **234**, 1123692.
- Healey, M. P. and Hodgkinson, G. P. (2017). 'Making strategy hot'. *California Management Review*, **59**, 109–34.
- Hess, U., Blairy, S. and Kleck, R. E. (2000). 'The influence of facial emotion displays, gender, and ethnicity on judgments of dominance and affiliation'. *Journal of Nonverbal Behavior*, **24**, 265–83.
- Hodgkinson, G. P. and Healey, M. P. (2008). 'Cognition in organizations'. *Annual Review of Psychology*, **59**, 387–417.
- Hunter, J. E. and Schmidt, F. L. (2015). *Methods of Meta-analysis: Correcting Error and Bias in Research Findings*, 3rd edition. Newbury Park: Sage.
- Jiang, L., Li, F., Li, Y. and Li, R. (2017). 'Leader-member exchange and safety citizenship behavior: The mediating role of coworker trust'. *Work*, **56**, 387–95.
- Johns, G. (2017). 'Reflections on the 2016 decade award: Incorporating context in organizational research'. *Academy of Management Review*, **42**, 577–95.

- Jones, G. R. and George, M. (1998). 'The experience and evolution of trust: Implications for cooperation and teamwork'. *Academy of Management Review*, **23**, 531–46.
- Jones, K. (1996). 'Trust as an affective attitude'. *Ethics*, **107**, 4–25.
- Judge, T. A. and Kammeyer-Mueller, J. D. (2012). 'Job attitudes'. *Annual Review of Psychology*, **63**, 341–67.
- Kaltiainen, J., Lipponen, J. and Holtz, B. C. (2017). 'Dynamic interplay between merger process justice and cognitive trust in top management: A longitudinal study'. *Journal of Applied Psychology*, **102**, 636–47.
- Keltner, D., Haidt, J. and Shiota, M. N. (2006). 'Social functionalism and the evolution of emotions'. In Schaller, M., Simpson, J. A. and Kenrick, D. T. (Eds), *Evolution and Social Psychology*. New York: Psychosocial Press, 115–42.
- Keltner, D. and Lerner, J. S. (2010). 'Emotion'. In Gilbert, D., Fiske, S. and Lindzey, G. (Eds), *The Handbook of Social Psychology*, 5th edition. New York: McGraw-Hill, 317–52.
- Korsgaard, M. A., Kautz, J., Bliese, P., Samson, K. and Kostyszyn, P. (2018). 'Conceptualising time as a level of analysis: New directions in the analysis of trust dynamics'. *Journal of Trust Research*, **8**, 142–65.
- Kramer, R. M. (1999). 'Trust and distrust in organizations: Emerging perspectives, enduring questions'. *Annual Review of Psychology*, **50**, 569–98.
- Kramer, R. M. and Lewicki, R. J. (2010). 'Repairing and enhancing trust: Approaches to reducing organizational trust deficits'. *Academy of Management Annals*, **4**, 245–77.
- Lee, A., Martin, R., Thomas, G., Guillaume, Y. and Maio, G. R. (2015). 'Conceptualizing leadership perceptions as attitudes: Using attitude theory to further understand the leadership process'. *The Leadership Quarterly*, **26**, 910–34.
- Legood, A., van der Werff, L., Lee, A. and Den Hartog, D. (2021). 'A meta-analysis of the role of trust in the leadership-performance relationship'. *European Journal of Work and Organizational Psychology*, **30**, 1–22.
- Lei, H. S., Lai, C. F. and Chen, C. C. (2018). 'How does project supervisor maintain sustainability of project members? A study from leadership perspective'. *Sustainability*, **10**, 2785.
- Lerner, J. S. and Keltner, D. (2000). 'Beyond valence: Toward a model of emotion-specific influences on judgement and choice'. *Cognition and Emotion*, **14**, 473–93.
- Lerner, J. S., Li, Y., Valdesolo, P. and Kassam, K. S. (2015). 'Emotion and decision making'. *Annual Review of Psychology*, **66**, 799–823.
- Lewicki, R. J. and Brinsfield, C. (2011). 'Framing trust: Trust as a heuristic'. In Donohue, W. A., Rogan, R. R. and Kaufman, S. (Eds), *Framing Matters: Perspectives on Negotiation Research and Practice in Communication*. New York: Peter Lang, 110–35.
- Lewicki, R. J. and Bunker, B. B. (1996). 'Developing and maintaining trust in work relationships'. In Kramer, R. and Taylor, T. R. (Eds), *Trust in Organizations: Frontiers in Theory and Research*. Thousand Oaks, CA: Sage, 114–39.
- Lewicki, R. J., McAllister, D. J. and Bies, R. J. (1998). 'Trust and distrust: New relationships and realities'. *Academy of Management Review*, **23**, 438–58.
- Lewicki, R. J., Tomlinson, E. C. and Gillespie, N. (2006). 'Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions'. *Journal of Management*, **32**, 991–1022.
- Lewis, J. D. and Weigert, A. (1985). 'Trust as a social reality'. *Social Forces*, **63**, 967–85.
- Li, P. P. (2007). 'Toward an interdisciplinary conceptualization of trust: A typological approach'. *Management and Organization Review*, **3**, 421–45.
- Li, P. P. (2015). 'Trust as a leap of hope for transaction value: A two-way street above and beyond trust propensity and expected trustworthiness'. In Bornstein, B. and Tomkins, A. (Eds), *Motivation Cooperation and Compliance with Authority, Vol. 62*. Nebraska Symposium on motivation, New York: Springer International Publishing, 37–53.
- Lount, R. B. Jr. (2010). 'The impact of positive mood on trust in interpersonal and intergroup interactions'. *Journal of Personality and Social Psychology*, **98**, 420–33.
- Lu, S. and Hao, G. (2013). 'The influence of owner power in fostering contractor cooperation: Evidence from China'. *International Journal of Project Management*, **31**, 522–31.
- Lu, X. (2014). 'Ethical leadership and organizational citizenship behavior: The mediating roles of cognitive and affective trust'. *Social Behavior and Personality*, **42**, 379–89.
- Mach, M. and Baruch, Y. (2015). 'Team performance in cross cultural project teams: The moderated mediation role of consensus, heterogeneity, faultlines and trust'. *Cross Cultural Management*, **22**, 464–86.
- Mayer, R. C. and Davis, J. H. (1999). 'The effect of the performance appraisal system on trust for management: A field quasi-experiment'. *Journal of Applied Psychology*, **84**, 123–36.
- Mayer, R. C., Davis, J. H. and Schoorman, F. D. (1995). 'An integrative model of organizational trust'. *Academy of Management Review*, **20**, 709–34.

- McAllister, D. J. (1995). 'Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations'. *Academy of Management Journal*, **38**, 24–59.
- McAllister, D. J., Lewicki, R. J. and Chaturvedi, S. (2006). 'Trust in developing relationships: From theory to measurement'. *Academy of Management Proceedings*, **2006**, G1–G6.
- McEvily, B. (2011). 'Reorganizing the boundaries of trust: From discrete alternatives to hybrid forms'. *Organization Science*, **22**, 1266–76.
- McEvily, B., Perrone, V. and Zaheer, A. (2003). 'Trust as an organizing principle'. *Organization Science*, **14**, 91–103.
- McEvily, B. and Tortoriello, M. (2011). 'Measuring trust in organizational research: Review and recommendations'. *Journal of Trust Research*, **1**, 23–63.
- Mellers, B. A., Schwartz, A. and Cooke, A. D. (1998). 'Judgment and decision making'. *Annual Review of Psychology*, **49**, 447–77.
- Melwani, S., Mueller, J. S. and Overbeck, J. R. (2012). 'Looking down: The influence of contempt and compassion on emergent leadership categorizations'. *Journal of Applied Psychology*, **97**, 1171–85.
- Method, J. R., Melwani, S. and Rothman, N. B. (2017). 'The space between us: A social-functional emotions view of ambivalent and indifferent workplace relationships'. *Journal of Management*, **43**, 1789–819.
- Miao, Q., Newman, A. and Huang, X. (2014). 'The impact of participative leadership on job performance and organizational citizenship behavior: Distinguishing between the mediating effects of affective and cognitive trust'. *International Journal of Human Resource Management*, **25**, 2796–810.
- Newman, A., Kiazad, K., Miao, Q. and Cooper, B. (2014). 'Examining the cognitive and affective trust-based mechanisms underlying the relationship between ethical leadership and organizational citizenship: A case of the head leading the heart?'. *Journal of Business Ethics*, **123**, 113–23.
- Newman, A., Rose, P. S. and Teo, S. T. (2016). 'The role of participative leadership and trust-based mechanisms in eliciting intern performance: Evidence from China'. *Human Resource Management*, **55**, 53–67.
- Olekalns, M. and Smith, P. L. (2005). 'Moments in time: Metacognition, trust, and outcomes in dyadic negotiations'. *Personality and Social Psychology Bulletin*, **31**, 1696–707.
- Parayitam, S. and Dooley, R. S. (2009). 'The interplay between cognitive-and affective conflict and cognition-and affect-based trust in influencing decision outcomes'. *Journal of Business Research*, **62**, 789–96.
- Rousseau, D. M. and Fried, Y. (2001). 'Location, location, location: Contextualizing organizational research'. *Journal of Organizational Behavior*, **22**, 1–13.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S. and Camerer, C. (1998). 'Not so different after all: A cross-discipline view of trust'. *Academy of Management Review*, **23**, 393–404.
- Schaubroeck, J., Lam, S. S. and Peng, A. C. (2011). 'Cognition-based and affect-based trust as mediators of leader behavior influences on team performance'. *Journal of Applied Psychology*, **96**, 863–71.
- Schoorman, F. D., Mayer, R. C. and Davis, J. H. (2007). 'An integrative model of organizational trust: Past, present, and future'. *Academy of Management Review*, 344–54.
- Shao, B. (2019). 'Moral anger as a dilemma? An investigation on how leader moral anger influences follower trust'. *The Leadership Quarterly*, **30**, 365–82.
- Shapiro, D. L., Sheppard, B. H. and Cheraskin, L. (1992). 'Business on a handshake'. *Negotiation Journal*, **8**, 365–77.
- Shapiro, S. P. (1990). 'Collaring the crime, not the criminal: Reconsidering the concept of white-collar crime'. *American Sociological Review*, **55**, 346–65.
- Sitkin, S. B. and Roth, N. L. (1993). 'Explaining the limited effectiveness of legalistic "remedies" for trust/distrust'. *Organization Science*, **4**, 367–92.
- Tiedens, L. Z. and Linton, S. (2001). 'Judgment under emotional certainty and uncertainty: The effects of specific emotions on information processing'. *Journal of Personality and Social Psychology*, **81**, 973–88.
- Tomlinson, E. C. and Mayer, R. C. (2009). 'The role of causal attribution dimensions in trust repair'. *Academy of Management Review*, **34**, 85–104.
- Tomlinson, E. C., Schnackenberg, A. K., Dawley, D. and Ash, S. R. (2020). 'Revisiting the trustworthiness–trust relationship: Exploring the differential predictors of cognition-and affect-based trust'. *Journal of Organizational Behavior*, **41**, 535–50.
- van der Werff, L. and Buckley, F. (2017). 'Getting to know you: A longitudinal examination of trust cues and trust development during socialization'. *Journal of Management*, **43**, 742–70.
- van der Werff, L., Legood, A., Buckley, F., Weibel, A. and de Cremer, D. (2019). 'Trust motivation: The self-regulatory processes underlying trust decisions'. *Organizational Psychology Review*, **9**, 99–123.
- van Kleef, G. A. (2014). 'Understanding the positive and negative effects of emotional expressions in organizations: EASI does it'. *Human Relations*, **67**, 1145–64.

- van Knippenberg, D. (2018). 'Reconsidering affect-based trust: A new research agenda'. In Searle, R. H., Neinaber, A. M. and Sitkin, S. B. (Eds), *Routledge Companion to Trust*. Abingdon: Routledge, 3–13.
- van Knippenberg, D. and van Kleef, G. A. (2016). 'Leadership and affect: Moving the hearts and minds of followers'. *Academy of Management Annals*, **10**, 799–840.
- Venkatesh, V., Thong, J. Y. and Xu, X. (2012). 'Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology'. *MIS Quarterly*, **36**, 157–78.
- Wang, S., Shang, G. and Zhang, S. (2019). 'Corporate governance and evolution of trust in entrepreneurial networks'. *Chinese Management Studies*, **13**, 939–66.
- Webber, S. S. (2008a). 'Development of cognitive and affective trust in teams: A longitudinal study'. *Small Group Research*, **39**, 746–69.
- Webber, S. S. (2008b). 'Blending service provider-client project teams to achieve client trust: Implications for project team trust, cohesion, and performance'. *Project Management Journal*, **39**, 72–81.
- Williams, M. (2001). 'In whom we trust: Group membership as an affective context for trust development'. *Academy of Management Review*, **26**, 377–96.
- Willis, J. and Todorov, A. (2006). 'First impressions: Making up your mind after a 100-ms exposure to a face'. *Psychological Science*, **17**, 592–98.
- Yang, D. J. and Wu, M. J. (2014). 'Does customer trust play a mediating role between salesperson competence and performance?'. *International Journal of Management, Economics and Social Sciences*, **3**, 100–21.
- Yang, J. (2005). *The Role of Trust in Organizations: Do Foci and Bases Matter*. Unpublished doctoral dissertation. Nanjing University, China.
- Yang, J. and Mossholder, K. W. (2006). *Trust in Organizations: A Multi-Bases, Multi-Foci Investigation*. Paper presented at the 21st Annual Meeting of the Society for Industrial and Organizational Psychology, Dallas, TX.
- Yang, J. and Mossholder, K. W. (2010). 'Examining the effects of trust in leaders: A bases-and-foci approach'. *Leadership Quarterly*, **21**, 50–63.
- Yang, J., Mossholder, K. W. and Peng, T. K. (2009). 'Supervisory procedural justice effects: The mediating roles of cognitive and affective trust'. *Leadership Quarterly*, **20**, 143–54.
- Zajonc, R. B. (1984). 'On the primacy of affect'. *American Journal of Psychology*, **39**, 117–23.
- Zhu, W., Newman, A., Miao, Q. and Hooke, A. (2013). 'Revisiting the mediating role of trust in transformational leadership effects: Do different types of trust make a difference?'. *Leadership Quarterly*, **24**, 94–105.
- Zhu, Y. and Akhtar, S. (2014a). 'How transformational leadership influences follower helping behavior: The role of trust and prosocial motivation'. *Journal of Organizational Behavior*, **35**, 373–92.
- Zhu, Y. and Akhtar, S. (2014b). 'The mediating effects of cognition-based trust and affect-based trust in transformational leadership's dual processes: Evidence from China'. *International Journal of Human Resource Management*, **25**, 2755–71.

## APPENDIX A

**Cognitive evaluations** are based on thoughts and beliefs about a person. These statements reflect values and attributes assigned to that person. They include beliefs about the person, characteristics of the person, and relationships between the person and other people (including self). Examples of a cognitive evaluation would be: 'This person is intelligent' or 'I am satisfied with the way this person acts at work'.

**Affective evaluations** express the degree of liking or disliking attached to a person. These statements should express like or dislike, feelings, and emotional and physiological reactions to a person. Examples of affective evaluations would be: 'I feel happy when I am with this person' or 'Working with this person is frustrating'.

## APPENDIX B

### List of Articles Included in Empirical Review. References Marked with an Asterisk Indicate Studies Included in the Meta-Analysis.

- \*Abrantes, A. C. M., Mach, M. and Ferreira, A. I. (2020). 'Tenure matters for team cohesion and performance: the moderating role of trust in the coach'. *European Sport Management Quarterly*, Ahead of Print, 1–22.
- \*Adamovic, M., Gahan, P., Olsen, J. E., Harley, B., Healy, J. and Theilacker, M. (2020). 'Bringing the

leader back in: Why, how, and when leadership empowerment behavior shapes coworker conflict'. *Group and Organization Management*, **45**, 599–636.

Adeel, M. M., Khan, H. G. A., Zafar, N. and Rizvi, S. T. (2018). 'Passive leadership and its relationship with organizational justice: Verifying mediating role of affect-based trust'. *Journal of Management Development*, **37**, 212–23.

\*Akgün, A. E., Byrne, J., Keskin, H., Lynn, G. S. and Imamoglu, S. Z. (2005). 'Knowledge networks in new product development projects: A transactive memory perspective'. *Information and Management*, **42**, 1105–20.

Altunoğlu, A. E., Şahin, F. and Babacan, S. (2019). 'Transformational leadership, trust, and follower outcomes: a moderated mediation model'. *Management Research Review*, **42**, 370–90.

Bai, S., Lu, F. and Liu, D. (2019). 'Subordinates' responses to paternalistic leadership according to leader level'. *Social Behavior and Personality*, **47**, 1–14.

\*Barczak, G., Lassk, F. and Mulki, J. (2010). 'Antecedents of team creativity: An examination of team emotional intelligence, team trust and collaborative culture'. *Creativity and Innovation Management*, **19**, 332–45.

\*Berkovich, I. (2018a). 'Effects of principal-teacher gender similarity on teacher's trust and organization-al commitment'. *Sex Roles*, **78**, 561–72.

\*Berkovich, I. (2018b). 'Typology of trust relationships: Profiles of teachers' trust in principal and their implications'. *Teachers and Teaching*, **24**, 749–67.

\*Camgöz, S. and Karapinar, P. (2016). 'Linking secure attachment to commitment: trust in supervisors'. *Leadership and Organization Development Journal*, **37**, 387–402.

\*Carter, M. Z. and 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**, 1349–57.

Casimir, G., Lee, K. and Loon, M. (2012). 'Knowledge sharing: influences of trust, commitment and cost'. *Journal of Knowledge Management*, **16**, 740–53.

\*Chang, H. T. and Chi, N. W. (2007). 'Human resource managers' role consistency and HR performance indicators: The moderating effect of interpersonal trust in Taiwan'. *International Journal of Human Resource Management*, **18**, 665–83.

Chen, X. P., Eberly, M. B., Chiang, T. J., Farh, J. L. and Cheng, B. S. (2014). 'Affective trust in Chinese leaders: Linking paternalistic leadership to employee performance'. *Journal of Management*, **40**, 796–819.

\*Chen, T., Li, F. and Leung, K. (2017). 'Whipping into shape: Construct definition, measurement, and validation of directive-achieving leadership in Chinese culture'. *Asia Pacific Journal of Management*, **34**, 537–63.

\*Chen, X., Peng, J., Lei, X. and Zou, Y. (2021). 'Leave or stay with a lonely leader? An investigation into whether, why, and when leader workplace loneliness increases team turnover intentions'. *Asian Business and Management*, **20**, 280–303.

\*Chen, Z. X. and Wang, H. Y. (2017). 'Abusive supervision and employees' job performance: A multiple mediation model'. *Social Behavior and Personality*, **45**, 845–58.

\*Chen, L. H. and Wu, C. H. (2014). 'Gratitude enhances change in athletes' self-esteem: The moderating role of trust in coach'. *Journal of Applied Sport Psychology*, **26**, 349–62.

\*Cheung, S. Y., Gong, Y., Wang, M., Zhou, L. and Shi, J. (2016). 'When and how does functional diversity influence team innovation? The mediating role of knowledge sharing and the moderation role of affect-based trust in a team'. *Human Relations*, **69**, 1507–31.

\*Chiang, C. F. and Lin, M. Y. (2016). 'Motivating organizational commitment in hotels: The relationship between leaders and employees'. *Journal of Human Resources in Hospitality and Tourism*, **15**, 462–84.

\*Choi, B. K., Moon, H. K. and Nae, E. Y. (2014). 'Cognition-and affect-based trust and feedback-seeking behavior: The roles of value, cost, and goal orientations'. *The Journal of Psychology*, **148**, 603–20.

\*Chou, L. F., Cheng, B. S., Huang, M. P. and Cheng, H. Y. (2006). 'Guanxi networks and members' effectiveness in Chinese work teams: Mediating effects of trust networks'. *Asian Journal of Social Psychology*, **9**, 79–95.

\*Chua, R. Y. J., Ingram, P. and 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**, 436–52.

\*Chua, R. Y., Morris, M. W. and Ingram, P. (2010). 'Embeddedness and new idea discussion in professional networks: The mediating role of affect-based trust'. *Journal of Creative Behavior*, **44**, 85–104.

\*Chua, R. Y., Morris, M. W. and 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**, 490–508.

\*Chua, R. Y., Morris, M. W. and Mor, S. (2012). 'Collaborating across cultures: Cultural metacognition and affect-based trust in creative collaboration'. *Organizational Behavior and Human Decision Processes*, **118**, 116–31.

\*Colquitt, J. A., LePine, J. A., Zapata, C. P. and Wild, R. E. (2011). 'Trust in typical and high-reliability contexts: Building and reacting to trust among firefighters'. *Academy of Management Journal*, **54**, 999–1015.

Colquitt, J. A., LePine, J. A., Piccolo, R. F., Zapata, C. P. and Rich, B. L. (2012). 'Explaining the justice–performance relationship: Trust as exchange deepener or trust as uncertainty reducer?'. *Journal of Applied Psychology*, **97**, 1–15.

\*Conchie, S. M., Taylor, P. J. and Donald, I. J. (2012). 'Promoting safety voice with safety-specific transformational leadership: The mediating role of two dimensions of trust'. *Journal of Occupational Health Psychology*, **17**, 105–15.

\*Costigan, R. D., Insinga, R. C., Berman, J., Ilter, S. S., Kranas, G. and Kureshov, V. A. (2006). 'A cross-cultural study of supervisory trust'. *International Journal of Manpower*, **27**, 764–87.

Da'as, R. A. (2021). 'School principals' skills and teacher absenteeism during Israeli educational reform: exploring the mediating role of participation in decision-making, trust and job satisfaction'. *Journal of Educational Change*, **22**, 53–84.

\*Dadhich, A. and Bhal, K. T. (2008). 'Ethical leader behavior and leader-member exchange as predictors of subordinate behaviors'. *Vikalpa: The Journal for Decision Makers*, **33**, 15–25.

Davis, D. D. and Bryant, J. L. (2010). 'Leader-member exchange, trust, and performance in national science foundation industry/university cooperative research centers'. *Journal of Technology Transfer*, **35**, 511–26.

\*Dayan, M. and Di Benedetto, C. A. (2010). 'The impact of structural and contextual factors on trust formation in product development teams'. *Industrial Marketing Management*, **39**, 691–703.

\*De Cremer, D., van Dijke, M. and Bos, A. E. (2006). 'Leader's procedural justice affecting identification and trust'. *Leadership and Organization Development Journal*, **27**, 554–65.

\*Ding, Z. and Ng, F. (2007). 'Reliability and validity of the Chinese version of McAllister's trust scale'. *Construction Management and Economics*, **25**, 1107–17.

Ding, Z., Ng, F. and Li, J. (2014). 'A parallel multiple mediator model of knowledge sharing in architectural design project teams'. *International Journal of Project Management*, **32**, 54–65.

\*Doucet, O., Fredette, M., Simard, G. and Tremblay, M. (2015). 'Leader profiles and their effectiveness on employees' outcomes'. *Human Performance*, **28**, 244–64.

Dowell, D., Morrison, M. and Heffernan, T. (2015). 'The changing importance of affective trust and cognitive trust across the relationship lifecycle: A study of business-to-business relationships'. *Industrial Marketing Management*, **44**, 119–30.

Dunn, J., Ruedy, N. E. and Schweitzer, M. E. (2012). 'It hurts both ways: How social comparisons harm affective and cognitive trust'. *Organizational Behavior and Human Decision Processes*, **117**, 2–14.

\*Ergeneli, A., Ari, G. S. and Metin, S. (2007). 'Psychological empowerment and its relationship to trust in immediate managers'. *Journal of Business Research*, **60**, 41–49.

\*Ertürk, A. (2010). 'Exploring predictors of organizational identification: Moderating role of trust on the associations between empowerment, organizational support, and identification'. *European Journal of Work and Organizational Psychology*, **19**, 409–41.

\*Eva, N., Newman, A., Miao, Q., Cooper, B. and Herbert, K. (2019). 'Chief executive officer participative leadership and the performance of new venture teams'. *International Small Business Journal*, **37**, 69–88.

Fryxell, G. E., Dooley, R. S. and Vryza, M. (2002). 'After the ink dries: the interaction of trust and control in US-based international joint ventures'. *Journal of Management Studies*, **39**, 865–86.

Gobena, L. B. and Van Dijke, M. (2016). 'Power, justice, and trust: A moderated mediation analysis of tax compliance among Ethiopian business owners'. *Journal of Economic Psychology*, **52**, 24–37.

\*Goh, S.-K. and Low, B. Z. (2014). 'The influence of servant leadership towards organizational commitment: The mediating role of trust in leaders'. *International Journal of Business and Management*, **9**, 17–25.

\*Goh, S. K. and Sandhu, M. S. (2014). 'The Influence of Trust on Knowledge Donating and Collecting: An Examination of Malaysian Universities'. *International Education Studies*, **7**, 125–36.

Growe, A. (2019). 'Developing trust in face-to-face interaction of knowledge-intensive business services (KIBS)'. *Regional Studies*, **53**, 720–30.

Hamill, H., Hampshire, K., Mariwah, S., Amoako-Sakyi, D., Kyei, A. and Castelli, M. (2019). 'Managing uncertainty in medicine quality in Ghana: The cognitive and affective basis of trust in a high-risk, low-regulation context'. *Social Science and Medicine*, Ahead of Print Version

Han, S., Harold, C. M. and Cheong, M. (2019). 'Examining why employee proactive personality influences empowering leadership: The roles of cognition-and affect-based trust'. *Journal of Occupational and Organizational Psychology*, **92**, 352–83.

\*Harms, P. D., Bai, Y. and Han, G. H. (2016). 'How leader and follower attachment styles are mediated by trust'. *Human Relations*, **69**, 1853–76.

\*Hempel, P. S., Zhang, Z. X. and Tjosvold, D. (2009). 'Conflict management between and within teams for trusting relationships and performance in China'. *Journal of Organizational Behavior*, **30**, 41–65.

Höglund, L., Mårtensson, M. and Safari, A. (2019). 'The impact of types of trust in the public sector – a case study approach'. *International Journal of Public Sector Management*, **32**, 247–63.

\*Holste, J. S. and Fields, D. (2010). 'Trust and tacit knowledge sharing and use'. *Journal of Knowledge Management*, **14**, 128–40.

\*Holtzhausen, N. and de Klerk, J. J. (2018). 'Servant leadership and the scrum team's effectiveness'. *Leadership and Organization Development Journal*, **39**, 873–82.

Holtz, B. C. and Hu, B. (2017). 'Passive leadership: relationships with trust and justice perceptions'. *Journal of Managerial Psychology*, **32**, 119–30

\*Hon, A. H. and Lu, L. (2010). 'The mediating role of trust between expatriate procedural justice and employee outcomes in Chinese hotel industry'. *International Journal of Hospitality Management*, **29**, 669–76.

\*Hon, A. H. and Lu, L. (2015). 'Are we paid to be creative? The effect of compensation gap on creativity in an expatriate context'. *Journal of World Business*, **50**, 159–67.

\*Hong, C. H., Zhu, D. S. and White, L. P. (2013). 'Colleague guanxi intensity: Scale development and validation'. *Journal of Management and Organization*, **19**, 756–78.

\*Hoogervorst, N., Metz, J., Roza, L. and van Baren, E. (2016). 'How perceptions of altruism and sincerity affect client trust in volunteers versus paid workers'. *Nonprofit and Voluntary Sector Quarterly*, **45**, 593–611.

Hsieh, H. H. and Huang, J. T. (2018). 'Exploring factors influencing employees' impression management feedback-seeking behavior: The role of managerial coaching skills and affective trust'. *Human Resource Development Quarterly*, **29**, 163–80.

\*Huang, L. S. (2015). 'Trust in product review blogs: the influence of self-disclosure and popularity'. *Behaviour and Information Technology*, **34**, 33–44.

\*Huang, Q., Davison, R. M. and Gu, J. (2011). 'The impact of trust, guanxi orientation and face on the intention of Chinese employees and managers to engage in peer-to-peer tacit and explicit knowledge sharing'. *Information Systems Journal*, **21**, 557–77.

\*Iqbal, S., Farid, T., Khan, M. K., Zhang, Q., Khattak, A. and Ma, J. (2020). 'Bridging the gap between authentic leadership and employees communal relationships through trust'. *International Journal of Environmental Research and Public Health*, **17**, 250–62.

\*Jain, K. K. Sandhu, M. S. and Goh, S. K. (2015). 'Organizational climate, trust and knowledge sharing: Insights from Malaysia'. *Journal of Asia Business Studies*, **9**, 54–77.

- Ji, Y., Zhou, E., Li, C. and Yan, Y. (2015). 'Power distance orientation and employee help seeking: Trust in supervisor as a mediator'. *Social Behavior and Personality*, **43**, 1043–54.
- Jiang, C. X., Chua, R. Y., Kotabe, M. and Murray, J. Y. (2011). 'Effects of cultural ethnicity, firm size, and firm age on senior executives' trust in their overseas business partners: Evidence from China'. *Journal of International Business Studies*, **42**, 1150–73.
- \*Jiang, L., Li, F., Li, Y. and Li, R. (2017). 'Leader-member exchange and safety citizenship behavior: The mediating role of coworker trust'. *Work*, **56**, 387–95.
- Kaltiainen, J., Lipponen, J. and Holtz, B. C. (2017). 'Dynamic interplay between merger process justice and cognitive trust in top management: A longitudinal study'. *Journal of Applied Psychology*, **102**, 636–47.
- \*Kanawattanachai, P. and Yoo, Y. (2002). 'Dynamic nature of trust in virtual teams'. *The Journal of Strategic Information Systems*, **11**, 187–213.
- \*Karakowsky, L., Podolsky, M. and Elangovan, A. R. (2020). 'Signaling trustworthiness: The effect of leader humor on feedback-seeking behavior'. *The Journal of Social Psychology*, **160**, 170–89.
- \*Khan, M. S., Breitenacker, R. J., Gustafsson, V. and Schwarz, E. J. (2015). 'Innovative entrepreneurial teams: The give and take of trust and conflict'. *Creativity and Innovation Management*, **24**, 558–73.
- Khan, M. S., Breitenacker, R. J. and Schwarz, E. J. (2014). 'Entrepreneurial team locus of control: diversity and trust'. *Management Decision*, **52**, 1057–81.
- Kim, T. Y., Lee, D. R. and Wong, N. Y. S. (2016). 'Supervisor humor and employee outcomes: The role of social distance and affective trust in supervisor'. *Journal of Business and Psychology*, **31**, 125–39.
- \*Lai, C., Singh, B., Alshwer, A. A. and Shaffer, M. A. (2014). 'Building and leveraging interpersonal trust within and across MNE subsidiaries: A social exchange perspective'. *Journal of International Management*, **20**, 312–26.
- \*Lam, L. W., Loi, R. and Leong, C. (2013). 'Reliance and disclosure: How supervisory justice affects trust in supervisor and extra-role performance'. *Asia Pacific Journal of Management*, **30**, 231–49.
- Lapointe, É., Vandenbergh, C. and Boudrias, J. S. (2014). 'Organizational socialization tactics and newcomer adjustment: The mediating role of role clarity and affect-based trust relationships'. *Journal of Occupational and Organizational Psychology*, **87**, 599–624.
- Lawal, O. and Oguntuashe, K. (2012). 'Impacts of organizational leadership and culture on organizational trust: Role of job cadre'. *IFE Psychologia: An International Journal*, **20**, 394–402.
- \*Le, P. B. and Lei, H. (2018). 'The mediating role of trust in stimulating the relationship between transformational leadership and knowledge sharing processes'. *Journal of Knowledge Management*, **22**, 521–37.
- \*Lee, P., Gillespie, N., Mann, L. and Wearing, A. (2010). 'Leadership and trust: Their effect on knowledge sharing and team performance'. *Management Learning*, **41**, 473–91.
- Lee, D., Stajkovic, A. D. and Sergent, K. (2016). 'A field examination of the moderating role of group trust in group efficacy formation'. *Journal of Occupational and Organizational Psychology*, **89**, 856–76.
- \*Lei, H. S., Lai, C. F. and Chen, C. C. (2018). 'How Does Project Supervisor Maintain Sustainability of Project Members? A Study from Leadership Perspective'. *Sustainability*, **10**, 2785.
- \*Lei, H., Phouong, S. and Le, P. B. (2019). 'How to foster innovative culture and capable champions for Chinese firms: an empirical research'. *Chinese Management Studies*, **13**, 51–69.
- Li, M. and Hsu, C. H. (2018). 'Customer participation in services and employee innovative behavior: The mediating role of interpersonal trust'. *International Journal of Contemporary Hospitality Management*, **30**, 2112–31.
- \*Li, B., Nahm, A. Y., Wyland, R., Ke, J. Y. and Yan, W. (2015). 'Reassessing the role of Chinese workers in problem solving: a study of transformational leadership, trust and security in "lean" manufacturing'. *Asia Pacific Business Review*, **21**, 464–81.
- \*Liang, J. and Li, X. (2019). 'Explaining the procedural justice–perceived legitimacy relationship: Relying on relational concern or instrumental concern?'. *Journal of Community and Applied Social Psychology*, **29**, 193–206.
- Lin, R. S. J. and Hsiao, J. K. (2014). 'The relationships between transformational leadership, knowledge sharing, trust and organizational citizenship behavior'. *International Journal of Innovation, Management and Technology*, **5**, 171–74.
- \*Liu, B. and Lu, Q. (2020). 'Creating a sustainable workplace environment: Influence of workplace

safety climate on Chinese healthcare employees' presenteeism from the perspective of affect and cognition'. *Sustainability*, **12**, 2414.

Liu, G., Yu, X. and Cheng, X. (2015). 'The Effects of Professional Managers' Credit on Their Work Performance: Firm Owners' Trust and Credit Identification Mechanisms'. *Frontiers of Business Research in China*, **9**, 192–206.

\*Loi, R., Lai, J. Y. and Lam, L. W. (2012). 'Working under a committed boss: A test of the relationship between supervisors' and subordinates' affective commitment'. *The Leadership Quarterly*, **23**, 466–75.

\*Lu, X. (2014). 'Ethical leadership and organizational citizenship behavior: The mediating roles of cognitive and affective trust'. *Social Behavior and Personality*, **42**, 379–89.

Lu, S. and Hao, G. (2013). 'The influence of owner power in fostering contractor cooperation: Evidence from China'. *International Journal of Project Management*, **31**, 522–31.

Lu, S. K. and Yan, H. (2016). 'Contractual control, the propensity to trust, active trust development: construction industry'. *Journal of Business and Industrial Marketing*, **31**, 459–71.

\*Lu, J., Zhang, Z. and Jia, M. (2019). 'Does servant leadership affect employees' emotional labor? A social information-processing perspective'. *Journal of Business Ethics*, **159**, 507–18.

Lux, A. A., Grover, S. L. and Teo, S. T. (2019). 'Reframing commitment in authentic leadership: Untangling relationship–outcome processes'. *Journal of Management and Organization*, Ahead of Print, 1–19.

Lyndon, S., Pandey, A. and Navare, A. (2020). 'Shared leadership and team creativity: Investigating the role of cognitive trust and team learning through mixed method approach'. *Personnel Review*, **49**, 1805–22.

Mach, M. and Baruch, Y. (2015). 'Team performance in cross cultural project teams: The moderated mediation role of consensus, heterogeneity, faultlines and trust'. *Cross Cultural Management*, **22**, 464–86.

\*Magnini, V. P., Lee, G. and Kim, B. C. (2011). 'The cascading affective consequences of exercise among hotel workers'. *International Journal of Contemporary Hospitality Management*, **23**, 624–43.

\*Massey, G. R. and Dawes, P. L. (2007) 'Personal characteristics, trust, conflict, and effectiveness in marketing/sales working relationships'. *European Journal of Marketing*, **41**, 1117–45.

\*Massey, G. R. and Kyriazis, E. (2007). 'Interpersonal trust between marketing and RandD during new product development projects'. *European Journal of Marketing*, **41**, 1146–72.

Massey, G. R., Wang, P. Z. and Kyngdon, A. S. (2019). 'Conceptualizing and modeling interpersonal trust in exchange relationships: The effects of incomplete model specification'. *Industrial Marketing Management*, **76**, 60–71.

\*Miao, Q., Newman, A. and Huang, X. (2014). 'The impact of participative leadership on job performance and organizational citizenship behavior: Distinguishing between the mediating effects of affective and cognitive trust'. *International Journal of Human Resource Management*, **25**, 2796–810.

\*Miao, Q., Newman, A., Schwarz, G. and Xu, L. (2013). 'Participative leadership and the organizational commitment of civil servants in China: the mediating effects of trust in supervisor'. *British Journal of Management*, **24**, S76–S92.

\*Miao, Q., Newman, A., Schwarz, G. and Xu, L. (2014). 'Servant leadership, trust, and the organizational commitment of public sector employees in China'. *Public Administration*, **92**, 727–43.

Moon, K. S., Ko, Y. J., Connaughton, D. P. and Lee, J. H. (2012). 'Athletes' trust, mental skills, and satisfaction in a gambling-legal cycle racing business in South Korea'. *European Sport Management Quarterly*, **12**, 291–308.

Mushonga, S. M. (2016). 'It's all in the Treatment: An Empirical Study of Fairness Perceptions in the Workplace'. *Journal of Organizational Psychology*, **16**, 63–74.

\*Mushonga, S. M., Thiagarajan, P. and Torrance, C. G. (2014). 'Fairness in the workplace: The mediating role of trust in the relationship between supervisory justice and work outcomes'. *SAM Advanced Management Journal*, **79**, 17–26.

Nacem, A., Mirza, N. H., Ayyub, R. M. and Lodhi, R. N. (2019). 'HRM practices and faculty's knowledge sharing behavior: mediation of affective commitment and affect-based trust'. *Studies in Higher Education*, **44**, 499–512.

\*Newman, A., Kiazad, K., Miao, Q. and Cooper, B. (2014). 'Examining the cognitive and affective trust-based mechanisms underlying the relationship between ethical leadership and organizational citizenship: A case of the head leading the heart?'. *Journal of Business Ethics*, **123**, 113–23.

- \*Newman, A., Rose, P. S. and Teo, S. T. (2016). 'The role of participative leadership and trust-based mechanisms in eliciting intern performance: Evidence from China'. *Human Resource Management*, **55**, 53–67.
- Ng, K. Y. and Chua, R. Y. (2006). 'Do I contribute more when I trust more? Differential effects of cognition-and affect-based trust'. *Management and Organization review*, **2**, 43–66.
- Olekalns, M. and Smith, P. L. (2005). 'Moments in time: Metacognition, trust, and outcomes in dyadic negotiations'. *Personality and Social Psychology Bulletin*, **31**, 1696–707.
- Olson, B. J., Bao, Y. and Parayitam, S. (2007). 'Strategic decision making within Chinese firms: The effects of cognitive diversity and trust on decision outcomes'. *Journal of World Business*, **42**, 35–46.
- \*Olson, B. J., Parayitam, S. and Bao, Y. (2007). 'Strategic decision making: The effects of cognitive diversity, conflict, and trust on decision outcomes'. *Journal of Management*, **33**, 196–222.
- \*Parayitam, S. and Dooley, R. S. (2007). 'The relationship between conflict and decision outcomes: Moderating effects of cognitive- and affect-based trust in strategic decision-making teams'. *International Journal of Conflict Management*, **18**, 42–73.
- Parayitam, S. and Dooley, R. S. (2009). 'The interplay between cognitive-and affective conflict and cognition-and affect-based trust in influencing decision outcomes'. *Journal of Business Research*, **62**, 789–96.
- Peng, A. C., Schaubroeck, J. M. and Li, Y. (2014). 'Social exchange implications of own and coworkers' experiences of supervisory abuse'. *Academy of Management Journal*, **57**, 1385–405.
- \*Ping, H., Mujtaba, B. G., Whetten, D. A. and Wei, Y. (2012). 'Leader personality characteristics and upward trust: A study of employee-supervisor dyads in China'. *Journal of Applied Business Research*, **28**, 1001–16.
- Reiche, B. S., Cardona, P., Lee, Y. T., Canela, M. Á., Akinnukawe, E., Briscoe, J. P. and Wilkinson, H. (2014). 'Why do managers engage in trustworthy behavior? A multilevel cross-cultural study in 18 countries'. *Personnel Psychology*, **67**, 61–98.
- Ren, S., Shu, R., Bao, Y. and Chen, X. (2016). 'Linking network ties to entrepreneurial opportunity discovery and exploitation: the role of affective and cognitive trust'. *International Entrepreneurship and Management Journal*, **12**, 465–85.
- Rutten, W., Blaas-Franken, J. and Martin, H. (2016). 'The impact of (low) trust on knowledge sharing'. *Journal of Knowledge Management*, **20**, 199–214.
- \*Saleem, F., Zhang, Y. Z., Gopinath, C. and Adeel, A. (2020). 'Impact of servant leadership on performance: The mediating role of affective and cognitive trust'. *SAGE Open*, **10**.
- \*Samian, Riantoputra, C. D. and Budihardjo, A. (2021). 'Why employees endorse abusive leaders: the role of trust'. *Human Resource Development International*, **24**, 133–50.
- \*Schaubroeck, J., Lam, S. S. and Peng, A. C. (2011). 'Cognition-based and affect-based trust as mediators of leader behavior influences on team performance'. *Journal of Applied Psychology*, **96**, 863–71.
- \*Schaubroeck, J. M., Peng, A. C. and Hannah, S. T. (2013). 'Developing trust with peers and leaders: Impacts on organizational identification and performance during entry'. *Academy of Management Journal*, **56**, 1148–68.
- Scheuer, C. L. and Loughlin, C. (2019). 'The moderating effects of status and trust on the performance of age-diverse work groups'. *Evidence-Based HRM: A Global Forum for Empirical Scholarship*, **7**, 56–74.
- \*Schwaer, C., Biemann, T. and Voelpel, S. (2012). 'Antecedents of employee's preference for knowledge-sharing tools'. *International Journal of Human Resource Management*, **23**, 3613–35.
- Sekhon, H., Ennew, C., Kharouf, H. and Devlin, J. (2014). 'Trustworthiness and trust: influences and implications'. *Journal of Marketing Management*, **30**, 409–30.
- Sekhon, H., Roy, S., Shergill, G. and Pritchard, A. (2013). 'Modelling trust in service relationships: a transnational perspective'. *Journal of Services Marketing*, **27**, 76–86.
- Shao, B. (2019). 'Moral anger as a dilemma? An investigation on how leader moral anger influences follower trust'. *The Leadership Quarterly*, **30**, 365–82.
- Son, S., Kim, D. Y. and Kim, M. (2014). 'How perceived interpersonal justice relates to job burnout and intention to leave: The role of leader-member exchange and cognition-based trust in leaders'. *Asian Journal of Social Psychology*, **17**, 12–24.
- Son, S. and Kuchinke, K. P. (2016). 'The moderating role of trust in formal mentoring relationships in Korea'. *Asia Pacific Journal of Human Resources*, **54**, 57–78.

Song, F., Cadsby, C. B. and Bi, Y. (2012). 'Trust, reciprocity, and guanxi in China: An experimental investigation'. *Management and Organization Review*, **8**, 397–421.

\*Stewart, K. J. and Gosain, S. (2006). 'The impact of ideology on effectiveness in open source software development teams'. *MIS Quarterly*, **30**, 291–314.

\*Swift, P. E. and Hwang, A. (2013). 'The impact of affective and cognitive trust on knowledge sharing and organizational learning'. *The Learning Organization*, **20**, 20–37.

Tekingündüz, S., Top, M., Tengilimoğlu, D. and Karabulut, E. (2017). 'Effect of organizational trust, job satisfaction, individual variables on the organizational commitment in healthcare services'. *Total Quality Management and Business Excellence*, **28**, 522–41.

Tian, Q. and Sanchez, J. I. (2017). 'Does paternalistic leadership promote innovative behavior? The interaction between authoritarianism and benevolence'. *Journal of Applied Social Psychology*, **47**, 235–46.

\*Tomlinson, E. C., Schnackenberg, A. K., Dawley, D. and Ash, S. R. (2020). 'Revisiting the trustworthiness–trust relationship: exploring the differential predictors of cognition-and affect-based trust'. *Journal of Organizational Behavior*, **41**, 535–50.

\*Top, M. and Tekingunduz, S. (2018). 'The effect of organizational justice and trust on job stress in hospital organizations'. *Journal of Nursing Scholarship*, **50**, 558–66.

\*Tourigny, L., Han, J. and Baba, V. V. (2017). 'Does gender matter? A study of trust and its outcomes in the manufacturing sector in mainland China'. *Gender in Management: An International Journal*, **32**, 554–77.

Tripathi, A., Bamel, U. K., Paul, H., Gordon, D. and Bamel, N. (2018). 'Antecedents of competitive group formation intention in business education context'. *International Journal of Organizational Analysis*, **26**, 518–35.

\*Tu, Y., Zhang, Y., Lu, X. and Wang, S. (2019). 'Differentiating two facets of trust in colleagues: How ethical leadership influences cross-team knowledge sharing'. *Leadership and Organization Development Journal*, **41**, 88–100.

Vasin, S. M., Gamidullaeva, L. A., Wise, N. and Korolev, K. Y. (2020). 'Knowledge exchange and the trust institution: A new look at the problem'. *Journal of the Knowledge Economy*, **11**, 1026–42.

\*Wah, N. C., Zawawi, D., Yusof, R. N. R., Sambasivan, M. and Karim, J. (2018). 'The mediating effect of tacit knowledge sharing in predicting innovative behaviour from trust'. *International Journal of Business and Society*, **19**, 937–54.

Wang, J. S. (2009). 'Trust and relationship commitment between direct selling distributors and customers'. *African Journal of Business Management*, **3**, 862–70.

Wang, W., Qiu, L., Kim, D. and Benbasat, I. (2016). 'Effects of rational and social appeals of online recommendation agents on cognition-and affect-based trust'. *Decision Support Systems*, **86**, 48–60.

Wang, S., Tomlinson, E. C. and Noe, R. A. (2010). 'The role of mentor trust and protégé internal locus of control in formal mentoring relationships'. *The Journal of Applied Social Psychology*, **95**, 358–67.

\*Webber, S. S. (2008a). 'Development of cognitive and affective trust in teams: A longitudinal study'. *Small Group Research*, **39**, 746–69.

\*Webber, S. S. (2008b). 'Blending service provider-client project teams to achieve client trust: Implications for project team trust, cohesion, and performance'. *Project Management Journal*, **39**, 72–81.

Webber, S. S. and Klimoski, R. J. (2004). 'Client–project manager engagements, trust, and loyalty'. *Journal of Organizational*, **25**, 997–1013.

Webber, S. S., Payne, S. C. and Taylor, A. B. (2012). 'Personality and trust fosters service quality'. *Journal of Business and Psychology*, **27**, 193–203.

Wu, X. N., Wu, X. and Wang, W. (2016). 'How do cognitive and affective trust impact process? outcome interaction?'. *Social Behavior and Personality*, **44**, 1395–407.

\*Xiaqi, D., Kun, T., Chongsen, Y. and Sufang, G. (2012). 'Abusive supervision and LMX: Leaders' emotional intelligence as antecedent variable and trust as consequence variable'. *Chinese Management Studies*, **6**, 257–70.

\*Xu, S., Jiang, X. and Walsh, I. J. (2018). 'The influence of openness to experience on perceived employee creativity: The moderating roles of individual trust'. *The Journal of Creative Behavior*, **52**, 142–55.

Yang, S. C. and Farn, C. K. (2009). 'Social capital, behavioural control, and tacit knowledge sharing – A multi-informant design'. *International Journal of Information Management*, **29**, 210–18.

\*Yang, J. and Mossholder, K. W. (2010). 'Examining the effects of trust in leaders: A bases-and-foci approach'. *Leadership Quarterly*, **21**, 50–63.

\*Yang, J., Mossholder, K. W. and Peng, T. K. (2009). 'Supervisory procedural justice effects: The mediating roles of cognitive and affective trust'. *Leadership Quarterly*, **20**, 143–54.

Yang, D. J. and Wu, M. J. (2014). 'Does customer trust play a mediating role between salesperson competence and performance?'. *International Journal of Management, Economics and Social Sciences*, **3**, 100–21.

Yuan, N. and Jian, L. (2012). 'The mediating role of trust in teammates in the relationship between differentiation in leader-member exchange (LMX) and work attitude: An empirical study in China'. *African Journal of Business Management*, **6**, 9617–25.

\*Zhang, X. J., Khan, F., Jinpeng, X. and Khan, K. U. (2019). 'Study of cognitive and affected trust in knowledge sharing evidence from Chinese firms – A review paper'. *COLLNET Journal of Scientometrics and Information Management*, **13**, 147–65.

Zhen, T., Xuan, Y. and Jing, Z. (2012). 'Trusting relationships of CTO-CEO and CTO's participation in technology strategy: Based on empirical study of Chinese high-tech firms'. *Chinese Management Studies*, **6**, 137–59.

\*Zhou, S., Siu, F. and Wang, M. (2010). 'Effects of social tie content on knowledge transfer'. *Journal of Knowledge Management*, **14**, 449–63.

\*Zhu, Y. and Akhtar, S. (2014a). 'How transformational leadership influences follower helping behavior: The role of trust and prosocial motivation'. *Journal of Organizational Behavior*, **35**, 373–92.

\*Zhu, Y. and Akhtar, S. (2014b). 'The mediating effects of cognition-based trust and affect-based trust in transformational leadership's dual processes: evidence from China'. *International Journal of Human Resource Management*, **25**, 2755–71.

\*Zhu, W., Newman, A., Miao, Q. and Hooke, A. (2013). 'Revisiting the mediating role of trust in transformational leadership effects: Do different types of trust make a difference?'. *Leadership Quarterly*, **24**, 94–105.

\*Zigarmi, D. and Roberts, T. P. (2017). 'A test of three basic assumptions of Situational Leadership II Model and their implications for HRD practitioners'. *European Journal of Training and Development*, **41**, 241–60.

Zur, A., Leckie, C. and Webster, C. M. (2012). 'Cognitive and affective trust between Australian exporters and their overseas buyers'. *Australasian Marketing Journal*, **20**, 73–79.