Measuring trust inside organisations

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Abstract

Purpose – The purpose of this paper is to examine the extent to which measures and operationalisations of intra-organisational trust reflect the essential elements of the existing conceptualisation of trust inside the workplace.

Design/methodology/approach – The paper provides an overview of the essential points from the rich variety of competing conceptualisations and definitions in the management and organisational literatures. It draws on this overview to present a framework of issues for researchers to consider when designing research based on trust. This framework is then used to analyse the content of 14 recently published empirical measures of intra-organisational trust. It is noted for each measure the form that trust takes, the content, the sources of evidence and the identity of the recipient, as well as matters related to the wording of items.

Findings – The paper highlights where existing measures match the theory, but also shows a number of "blind-spots" or contradictions, particularly over the content of the trust belief, the selection of possible sources of evidence for trust, and inconsistencies in the identity of the referent.

Research limitations/implications – It offers researchers some recommendations for future research designed to capture trust among different parties in organisations, and contains an Appendix with 14 measures for intra-organisational trust.

Originality/value – The value of the paper is twofold: it provides an overview of the conceptualisation literature, and a detailed content-analysis of several different measures for trust. This should prove useful in helping researchers refine their research designs in the future.

Keywords Trust, Organizations, Workplace

Paper type General review

Introduction

The organisational and management literature on trust is now extensive, and includes several key articles (e.g. Mayer *et al.*, 1995; Robinson, 1996; Whitener, 1997; Kramer, 1999), four significant compendiums of papers (Gambetta, 1988; Kramer and Tyler, 1996; Lane and Bachmann, 1998; Nooteboom and Six, 2003), and several dedicated journal editions (including *Academy of Management Review*, 1998, Vol. 23, No. 3; *Organization Studies*, 2001, Vol. 22, No. 2; *Organization Science*, 2003, Vol. 14, No. 1; *International Journal of Human Resource Management*, 2003, Vol. 14, No. 1, and *Personnel Review*, 2003, Vol. 32, No. 5).

Despite this resurgence of interest the treatment of trust remains extremely "fragmented" (McEvily *et al.*, 2003, p. 91). Firstly, there are three broad strands in the literature. Our focus here is exclusively with trust within organisations

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(i.e. as an intra-organisational phenomenon, such as between employees and supervisors/managers, or among co-workers). The other two strands deal with trust between organisations (i.e. an inter-organisational phenomenon), and trust between organisations and their customers (i.e. a marketing concern). Secondly, competing conceptualisations and definitions have emerged and the precise nature of trust remains contested. This is in part due to the different perspectives and academic disciplines informing empirical studies and theorising on the subject (for an overview see Rousseau *et al.*, 1998). It is also a consequence of most scholars regarding trust as a multi-dimensional construct (Butler, 1991). Put simply, opinions continue to differ on which dimensions are essential.

Several measures of intra-organisational trust are also available. Such a range of possible operationalisations may reflect the multi-disciplinary interest in trust, and its multi-dimensional nature, but it also hints at continuing dissatisfaction with the existing set of measures, an impression strengthened by the fact that there has been very little in the way of repeat testing of the instruments that we do have. Since our knowledge of a construct can only be as good as the measures we use to examine it, it is essential to evaluate the "validity" of these instruments (e.g. Schriesheim *et al.*, 1993) – not only for their statistical performance, but perhaps more importantly for how well they reflect the conceptualisation of the construct, with due consideration to its subtleties. Thus, our goal here is an examination of the extent to which available operationalisations of intra-organisational trust reflect the elements of the existing conceptualisation in the management literature. On this point, Currall and Judge (1995) have noted that what consensus has been reached on conceptualisation does not appear to have been translated into operationalisations in empirical research. In this paper, we set out to investigate this apparent "gap".

The paper is set out as follows. Before we can identify criteria for assessing the various measures, we need to be clear what it is we are measuring. Hence, the first section provides an overview of the debate on the conceptualisation and definition of trust within organisations. It highlights four main aspects: the different forms trust can take, its content, the sources of evidence informing it, and the identity of the referent (the person being trusted). From these we formulate guidelines for an examination of the content of 14 recent operationalisations of trust. We conclude with commentary on where we believe the possible "blind spots" of the current measures are, and we offer some recommendations for researchers to consider which might improve our operationalisation of this "central, superficially obvious but essentially complex" concept (Blois, 1999, p. 197).

A conceptualisation of trust

The challenge facing researchers interested in trust is that a great deal is involved in the process of party "A" (the trustor) trusting party "B" (the trustee).

The first consideration is the possible forms that trust can take. Drawing on elements from the most-quoted definitions of trust (presented in Table I), this can be broken down into three constituent parts: trust as a belief, as a decision, and as an action.

The first form of trust is a subjective, aggregated, and confident set of beliefs about the other party and one's relationship with her/him, which lead one to assume that the other party's likely actions will have positive consequences for oneself. Another way of

Definition	Author
The conscious regulation of one's dependence on another	Zand (1972)
The extent to which one is willing to ascribe good intentions to and have confidence in the words and actions of other people	Cook and Wall (1980)
A state involving confident positive expectations about another's motives with respect to oneself in situations entailing risk	Boon and Holmes (1991)
The extent to which a person is confident in, and willing to act on the basis of, the words, actions and decisions, of another	McAllister (1995)
The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party	Mayer *et al.* (1995)
The specific expectation that an other's actions will be beneficial rather than detrimental and the generalised ability to take for granted . . . a vast array of features of the social order.	Creed and Miles (1996)
Confident positive expectations regarding another's conduct in a context of risk	Lewicki *et al.* (1998)
. . . reflects an expectation or belief that the other party will act benevolently	Whitener *et al.* (1998)
A psychological state comprising the intention to accept vulnerability [to another] based upon positive expectations of the intentions or behaviour of another	Rousseau *et al.* (1998)

representing this belief is as an assessment of the other party's trustworthiness. However, trustworthiness and trust are two separate constructs (Mayer *et al.*, 1995, pp. 711, 729): trustworthiness is a quality that the trustee has, while trusting is something that the trustor does. Although A may consider B to be trustworthy this does not necessarily mean that A will actually trust B. Other factors may intervene (discussed below). A's belief in B's trustworthiness is nevertheless expected to be a strong predictor of A's decision to trust B, since the belief is based on "probabilities" (Nooteboom *et al.*, 1997) and carries a crucial "strength of feeling" (Bhattacharya *et al.*, 1998, p. 462) that elevates it above mere hopefulness, blind faith or gullibility (McEvily *et al.*, 2003, p. 99).

The second form of trust is the decision to actually trust the other party. This is the stage at which the belief in the others' trustworthiness is manifested – partially – in trust itself. For a genuine state of trust to exist both the expectation of trustworthy behaviour and the intention to act based upon it must be present (Huff and Kelley, 2003, p. 82). Clark and Payne (1997, p. 217) similarly view trust as "a process model where the decision to trust is based on an underlying subjective base of trust which conditions the intention to trust" (Costa, 2003). This decision has been defined as the "willingness to render oneself vulnerable" (Mayer *et al.*, 1995; Rousseau *et al.*, 1998). At this stage, A considers B to be trustworthy, and further intends to allow her/himself to be subject to the risk of potentially detrimental actions on the part of B, on the basis that such outcomes are unlikely.

However, this decision implies only an intention to act. For A to demonstrate unequivocally her/his trust in B, (s)he must follow through on this decision by engaging in any of the trust-informed risk-taking behaviours proposed by different authors (Sitkin and Pablo, 1992; Mayer *et al.*, 1995; Costa *et al.*, 2001). Gillespie (2003, 2004)

usefully divides these into two broad categories: "reliance"-related behaviours (such as, for example, a manager surrendering control over valuable resources or decisions to a subordinate, or deliberately reducing control over, or monitoring of, the subordinate's actions)[1], and "disclosure" in the sense of sharing potentially incriminating or damaging information with another party (such as a management team revealing commercially sensitive future strategy to union officials). Note that these risk-taking behaviours undertaken by A in the light of her/his assessment of B's trustworthiness need to be kept distinct from behaviours that indicate A's own trustworthiness, or B's behavioural response to being trusted (such as, in both cases, meeting certain obligations, keeping promises, dealing honestly with others, and resisting opportunism). Importantly, the action of trusting another is at best only a likely consequence of the decision to trust; it is by no means guaranteed. Although A might be willing to trust B, there may nevertheless be consequences for A beyond her/his relationship with B that may forestall the decision, such as the impact on party C's assessment of A should A decide to trust B (Nooteboom, 2003).

The question of whether the action of trusting should be incorporated into an overall model of trust is a point of contention in the literature. In part, this is an etymological problem brought about by the everyday connotations and uses of the word "trust" (Mayer and Davis, 1999), where trust as a belief, decision and a resulting action are regularly conflated. In much the most commonly cited conceptualisation, Mayer *et al.* (1995) separate trust from its associated behaviours. However, our conceptualisation reflects the distinction drawn by McEvily *et al.* (2003, p. 93) between trust's three necessary constituent parts: as "an expectation, a willingness to be vulnerable and a risk-taking act".

The content of the trust belief
The content of A's evaluation of B is the second essential consideration. This is one area of the literature where contrasting standpoints and emphases have rather muddied the waters. Trust is understood as a complex compilation of judgements by the trustor on different characteristics of the trustee. Butler and Cantrell (1984) proposed integrity, competence, consistency, loyalty and openness as key elements. Butler (1991) extended this to 11 separate conditions that the trusted party might be expected to fulfil: competence, integrity, consistency, discreetness, fairness, promise fulfilment, loyalty, availability, openness, receptivity, and overall trustworthiness. In their classic article, Mayer *et al.* (1995) focussed on ability, benevolence and integrity. Cunningham and McGregor (2000, pp. 1578-9) and Mishra (1996, p. 265) have both made powerful arguments for including predictability (or reliability).

Overall, these four attributes of the trustee – ability, benevolence, integrity and predictability – appear most often, and we consider them to be the most salient[2]. We defined each as follows: benevolence reflects benign motives and a personal degree of kindness toward the other party, and a genuine concern for their welfare; competence refers to the other party's capabilities to carry out her/his obligations (in terms of skills and knowledge); integrity involves adherence to a set of principles acceptable to the other party, encompassing honesty and fair treatment, and the avoidance of hypocrisy and predictability relates specifically to consistency and regularity of behaviour (and as such is distinct from competence or integrity). In any assessment of another's trustworthiness, each of these four content components is significant in itself since

the decision to trust someone might be expected to founder if one considers any of the four qualities to be absent from the other party[3]. Having said that, the four components are likely to be interdependent (Ross and LaCroix, 1996, p. 335) and the precise combination will be idiosyncratic to the circumstances and to the trustor. Lewicki *et al.* (1998) also argue that the trust belief can be compartmentalised and aggregated such that parties, if they wish, may accommodate contradictions and errors, if they still judge the quality of the other's trustworthiness, and/or the benefits of continuing to trust them, to be sufficient. In other words, one can trust or distrust different aspects of the other party.

To summarise, the content of trust is multi-faceted and is clearly not uni-dimensional. It is apparent, therefore, that the four content components should be viewed as separable "sub-domains" of trust (Mayer *et al.*, 1995, pp. 720-21).

Sources of the trust belief
Considerable debate exists in the literature on what inspires or inhibits trust. In other words, what are the sources of evidence upon which the beliefs about the other party's trustworthiness, and the decision to trust them, can properly be based (Williams, 2001, p. 379)? The possible influencing variables have been categorised in different ways. Lane and Bachmann (1998) separate them into micro-level (i.e. relationship-specific) factors, and macro-level factors (i.e. those external to the relationship). Whitener *et al.* (1998) distinguish between individual factors, relational factors and organisational factors, while Payne and Clark (2003) divide them into dispositional factors, interpersonal factors and situational factors. The overlaps are clear. We present them here as characteristics of "A" (the trustor), characteristics of "B" (the trustee), and characteristics of their relationship with each other.

Taking each in turn, a potentially decisive characteristic of the trustor "A" is her/his pre-disposition toward trusting others, what Rotter (1967) called "generalised trust". This has been split into generalised trust in strangers, and generalised trust in institutions such as the justice system and public officials. The level of each has been found to vary markedly among individuals, and this affects individuals' decision-making on trust (Kiffin-Petersen and Cordery, 2003, p. 107). Johnson George and Swap (1982) found that pre-disposition is especially relevant in the early phase of interactions with another, but its influence recedes over time as more direct evidence of the other party is accumulated. Other significant characteristics of the trustor may include her/his internalisation of nation-level cultural values and norms, including a readiness to engage in co-operation and to trust others (Huff and Kelley, 2003; Inglehart, 1999; Zak and Knack, 2001). Another might be the trustor's political persuasion: an employee with strong socialist opinions may be rather less trusting of managers than someone with more right-wing, business-oriented sympathies. The important point here is that people "tend to make incoming information fit with their prior attitudes, rather than the reverse" (Robinson, 1996, pp. 576-7). This implies strongly that A's pre-disposition and other attitudes might continue to exert a powerful influence on her/his reported trust in B, regardless of B's efforts or any trust-influencing independent variable.

The characteristics of the trustee "B" that typically undergo evaluation can be split into two main categories: personal traits and previous behaviour (i.e. her/his benevolence, competence, integrity and predictability, as discussed above). Both may

support, undermine or override the impressions of the other. However, a further obstacle is that A may only trust B in certain "domains" (Lewis and Weigert, 1985). For example, an employee might be confident in the ability of her supervisor to represent her work to others, but be reluctant to share personal or even work-related problems with that person (Gillespie, 2003). Similarly, a firm might entrust their new graduate intake with relatively small-scale managerial projects, but will likely be less confident about their strategic decision-making abilities. This point echoes our previous remarks on the importance of separating the four content components, to learn precisely what A trusts about B.

Beyond the parties involved, several aspects of the relationship itself are seen as influential in determining trust levels. Echoing Axelrod (1984), Raub and Weesie (1990) and Bijlsma-Frankema and Koopman (2003, pp. 547, 551) have highlighted the influence of the "shadow of the past" and the "shadow of the future": in other words, whether the trustor feels her/his position in the relationship is precarious or stable (Payne and Clark, 2003). On the relationship's structure, Sheppard and Sherman (1998) have proposed a two-by-two typology of levels of dependence/interdependence ("shallow" and "deep" for each), while Fiske's (1992) fourfold categories on the nature of social relationships – "authority ranking", "market pricing", "equity matching" or "communal sharing" – offer another model with implications for the nature of trust. The proposition is that stronger, more personal relationships (i.e. Sheppard and Sherman's "deep interdependence" or Fiske's "communal sharing") will see deeper and more affective forms of trust, while a more calculative approach to trust is better suited to more formal, detached relationships (i.e. "shallow interdependence" and "market pricing"). Lewicki and Bunker's (1996, pp. 119, 124) three-phase model of developmental trust – "early", "developing" and "mature" – infers that the quality of trust will vary according to the stage of progress in the relationship. Williams (2001) hypothesises that trust varies by the extent of familiarity (in-group and out-group membership) between the parties. Wicks' et al. (1999, p. 101) concept of "optimal trust" implies that parties' trust levels can assume different degrees (see below), as appropriate for the demands and quality of the relationship.

Sources of evidence at the macro-level beyond the actual relationship are also potentially decisive (Lewis and Weigert, 1985; Zucker, 1986). A "loose coupling" (Bachmann, 1998, p. 299) exists between these "situational parameters" (Barney and Hansen, 1994) and the sources of interpersonal/relational trust discussed above, such that the former may "underwrite" or undermine the latter (Misztal, 1995). As Weibel (2003, p. 668) puts it, "interpersonal trust is influenced by the institutional framework, but the institutional arrangement never completely determines the quality of social interaction". To illustrate, sanctions available to A, or incentives directed toward B, might so constrain B's options that A feels able to trust by proxy. These influences include binding contractual agreements, legislative or regulatory requirements, organisational systems and practices, and codes of conduct within a network of people. Examples include the Hippocratic Oath for doctors, and an organisation's grievance procedures or its performance management targets. Meyerson's et al. (1996) work on "swift trust" in temporary work groups found that a person's reputation, as promulgated by formal qualifications or the counsel of respected intermediaries or from within relevant social networks, can also serve as an externally-derived source of evidence for trust.

What is striking in the literature is that trustee-specific evidence is often assumed to be the sole source of evidence. However, the decision to trust may be reached by the trustor independent of the trustee's input, or it might be attributable to some other influence on the relationship beyond the trustee's jurisdiction.

Different qualitative degrees of trust
Trust is not a simple "either/or" matter. Nor do categories such as "conditional" and "unconditional" (Jones and George, 1998) or "strong" and "weak" (Barney and Hansen, 1994) capture its subtleties. The degree to which one trusts another varies along a continuum of intensity (Williams, 2001, p. 379). Five such degrees can be discerned in the literature (Figure 1). Though these are usually used to depict trust being derived from different sources, we agree with Lewicki and Bunker (1996) that the terms can also be used to describe different types of trust experience.

The first degree, "deterrence-based trust" (Rousseau *et al.*, 1998, p. 399), does not comply with the definition we use here. There is no positive expectation of goodwill and only through the threat of external sanctions and force is the expectation of compliance guaranteed; there is effectively no risk and no probabilities to consider. Rather than reflecting trust, it is a manifestation of distrust. Nor, too, can "calculus-based" trust (Lewicki and Bunker, 1996, p. 119) be considered real trust in this sense since, as the name suggests, trust is only considered a worthwhile strategy on the basis of a strict cost-benefit analysis, but a deep a priori suspicion of the other remains. Moreover, as Figure 1 suggests, the decisive evidence is likely to come from sources other than the trustee.

Between "calculus-based" trust and "knowledge-based" trust (Lewicki and Bunker, 1996, p. 121) a threshold is crossed when suspicions recede to be replaced by positive expectations based on confident knowledge about the other party, including their motives, abilities and reliability. Real trust, as it is most commonly defined in the literature, begins here.

As these expectations are vindicated by experience, more powerful degrees of trust may develop. The much stronger confidence in the other party that is depicted in "relational-based trust" (Rousseau *et al.*, 1998, p. 399) is more subjective and emotional in nature. It is derived more from the quality of the relationship over time than from observation of the other party's specific behaviours. Blois (1999, p. 200) sees the stronger degrees of trust coming more from an appraisal of the other party's "dependable goodwill" than from observation of their reliable habits. Creed and Miles
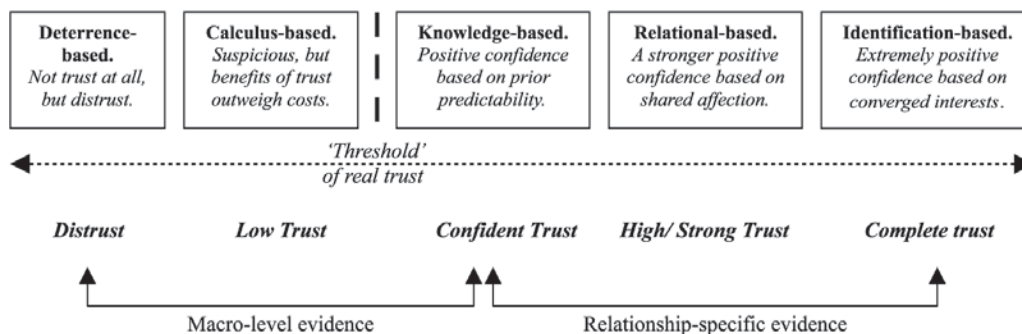

Figure 1.
The continuum of degrees
of intra-organisational
trust

(1996) make a comparable distinction between the trustee's "characteristics" (i.e. their personal qualities and motives), and "process-based" evidence.

Lastly, the overwhelming affection and complete unity of purpose described in "identification-based trust" (Lewicki and Bunker, 1996, p. 122) is such that both parties assume a common identity, and each party can represent the other's interests with their full confidence. The last two are equivalents of what Tyler (2003) terms "social" trust.

McAllister (1995) has represented trust evaluations as being either cognitive-based (i.e. informed by the kind of careful evaluation discussed above) or affective-based (i.e. informed more by emotional responses to the other party). He argues that a minimum level of cognition-based trust is necessary for affective forms to materialise (McAllister, 1995, p. 51). Rousseau *et al.* (1998) and Williams (2001) interpret the former as covering "calculus-based" and "knowledge-based trust", while the latter corresponds more to "relational-based" and "identification-based" trust.

It is apparent, then, that the formation of a trust belief about another party, and the decision to trust them or not, requires the sophisticated processing of huge amounts of often-contradictory information (Lewicki *et al.*, 1998). It strongly implies that the relationship between A and B is more than "A trusts B . . . " Instead, it is a "four-place predicate" (Nooteboom, 2002) that we summarise as: "A trusts B to do X (or not to do Y), when Z pertains . . . "

Figure 2 shows our multi-dimensional, integrated framework for looking at the process of intra-organisational trust. It adapts elements of existing models by Mayer *et al.* (1995) and Ross and LaCroix (1996). We use an open systems model (input-throughput-output). From left to right, it depicts the input, or antecedents, of trust; the different components of the trust process itself in the central panels and, finally, the different trust-informed behavioural outcomes.

Implications for measures of trust
The different elements discussed above, and shown in Figure 2, point toward a great many factors to be considered for a multi-dimensional measure of trust. We divide these into five research questions for our analysis:
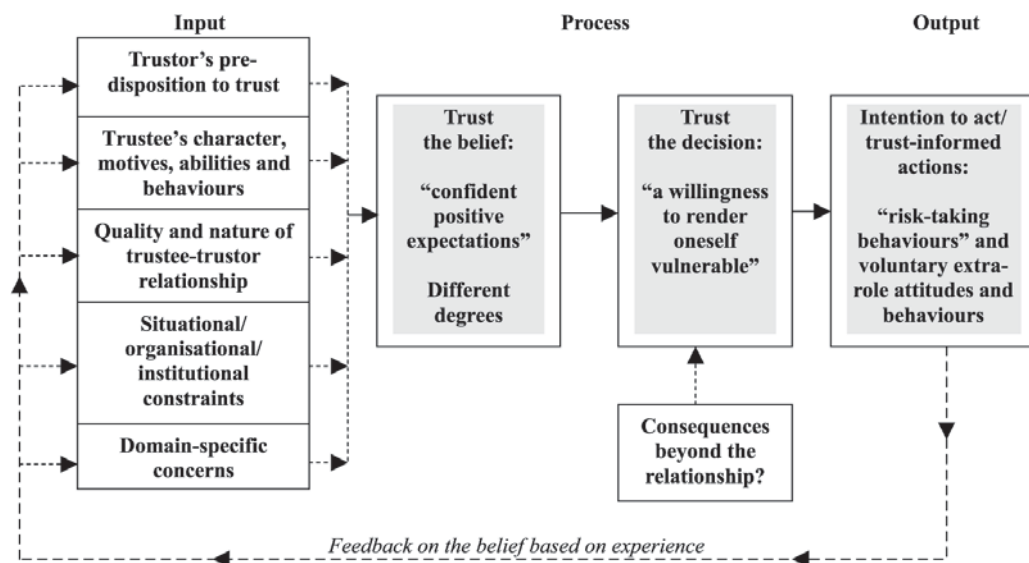

Figure 2.
A depiction of the trust process

RQ1. Which form of trust is being measured (i.e. a belief, a decision, or a trust-based behaviour)

RQ2. What is the content of the belief (i.e. the four content components)

RQ3. What is/are the source(s) of the belief (i.e. the characteristics of the trustee, the trustor, their relationship, and broader situational constraints)

RQ4. What is the identity of the referent (i.e. who is being trusted?)

RQ5. Some additional methodological observations on the wording of items.

Taking each in turn, our framework leads us to propose that a measure of trust should aim to capture more than the respondent's belief about the other party's trustworthiness (Mayer *et al.*, 1995, p. 729). Knowing that A considers B trustworthy is of little use if A does not intend to act on that basis, or declines to exhibit any of the associated trust-informed behaviours. In our analysis of the trust measures we noted for each which forms of trust were incorporated.

Second, we have argued that all four content components are significant and separable elements of the decision to trust. It follows that each should form part of a comprehensive measure (Mayer *et al.*, 1995, pp. 720-1). For our analysis, we categorised each item in each measure to discern which of the four content components the wording seemed to capture – regardless of any category assigned to it by the author(s) – to gauge the proportionate attention given to each. We also attempted to discern whether each item seemed to tap an affective or cognitive assessment of the other party.

The third aspect to consider when designing a trust measure is the source(s) of evidence. This provides valuable information on the link between a trust-inducing intervention and the decision to trust. For our analysis, we noted for each measure the apparent or assumed source of the respondent's judgement.

Fourth, trust levels may vary, according to the relationship under examination. Whitener (1997, pp. 396-7) notes how "employees typically engage in multiple exchange relationships, benefit differently from each other, and respond to each relationship with different behaviours and attitudes" (Dirks and Ferrin, 2002, p. 611). Clegg and Wall (1981) found that trust in management tends to decline as one moves down the organisational hierarchy. Butler (1983: cited in Payne and Clark, 2003, p. 131) found that secretaries trusted their bosses less than the bosses trusted their secretaries. Besides development of trust in a specific focal person, employees can also develop trust in generalised others, such as management or co-workers in general (Whitener, 1997; Den Hartog, 2003). Den Hartog *et al.* (2002) found that employees' trust in their supervisor was related to their trust in management in general. So, given that employees can distinguish between different referents and may have different relationships with each of them, it needs to be clear to respondents to whom the items refer (i.e. who is the referent). Accordingly, for our analysis, we noted who the referent was for each item.

Finally, the complexity of the trust process is such that respondents' probable initial reaction to items will be, "it depends" (e.g. "I trust person B to do X but not Y"). It therefore seems prudent that the wording should ask the respondent to make an overall assessment of the trustee, and cover a range of different work-based situations ("domains"). This point reaffirms the need to tap trust's four main content

components, which may be used to test for these different domains. Second, behavioural measures often contain reversed or negatively keyed items in order to decrease acquiescence response bias. However, negated items may tap different constructs, and in the trust literature trust and distrust are not seen as poles of a continuum: low distrust does not automatically imply high trust (Lewicki *et al.*, 1998). Negating affective items can also affect the response to that item (e.g. Pilotte and Gable, 1990), and such negated items are often harder to interpret. Research shows that negatively keyed items often do not meet scale analyses criteria and may even constitute reverse coding method factors (Cordery and Sevastos, 1993), as a consequence of careless responses, insufficient cognitive ability, impaired response accuracy, and the actual measurement of a different construct (Magazine *et al.*, 1996). A negated item on trust may tap distrust rather than low trust and might thus be measuring a different construct. Schriesheim *et al.* (1991) suggest that positively worded items are usually more reliable and accurate. This is apt for trust, since it is considered a desired state, "an attractive option" (Gambetta, 1988b, p. 219; Blois, 1999, p. 204). It follows that a clear majority of items should reflect it as a positive experience for the respondent, a "strength of feeling" commensurate with knowledge-based trust (at least). In addition, the conceptualisation of five degrees of intensity for trust suggests that "trust" itself is simply too broad a term to deploy: it might legitimately refer to degrees from "calculus-based" up to "identification-based" trust. Finally, we would tend to endorse Cummings and Bromiley's (1996, p. 302) prudent constraint that items should not use the word "trust". To be asked if you trust another party is "an emotive challenge" (Blois, 1999, p. 201), and the presence of the word "trust" might distort respondents' answers accordingly, whereas sentences with the word removed might be expected to receive a more measured response. For our analysis, we looked at each item for wording asking for overall judgements or across a range of domains, the proportion of negatively-worded items, and use of the word "trust".

A review of 14 trust measures
We confined our study to a selected sample of measures for which the full scale was reproduced. We also concentrated on studies conducted between 1995 and 2004 to increase the likelihood that the tools would reflect the latest debates on trust[4]. The 14 measures represent a sample of how the different conceptual dimensions of trust have been translated into empirical measures. In chronological order, they are those of McAllister (1995), Robinson (1996), the short-form inventory from Cummings and Bromiley (1996), Clark and Payne (1997), three separate measures from Brockner *et al.* (1997), Mayer and Davis (1999), Spreitzer and Mishra (1999), Shockley-Zalabak *et al.* (2000), Huff and Kelley (2003), Tyler (2003), Gillespie (2003) and Tzafrir and Dolan (2004). Appendix 1 summarises our analysis of the 14 measures according to our five research questions, and each measure is provided in full in Appendix 2.

We wish to preface our analysis with three important caveats. First, all of the measures have been used in high-quality research studies that have either been published in international journals or, in Gillespie's case, presented at the Academy of Management. All are statistically robust tools in terms of Cronbach's alpha scores, scale analyses, factor analyses, etc. This is not our research concern, however. Second,

they have also proved useful in relation to different types of research questions, and we concede that some of the weaknesses highlighted below are likely to have been as a consequence of research designs necessitating certain emphases, or the need for a parsimonious measure for trust in order to accommodate measures for other variables and constructs. Third, the analysis that follows is based on the strictures of our framework and so may not necessarily reflect the intentions of the author(s). In addition, though we worked carefully as two independent raters in order to reduce the likelihood of errors of interpretation, the analysis is inevitably a product of our subjective judgements.

The form of trust
Dirks and Ferrin (2002) have noted that most available measures are preoccupied only with the "belief" element of trust, the respondent's assessment of the referent's trustworthiness. Few test for the respondent's intention to act, and still fewer for actual trust-inspired behaviours. Our review partially supports this observation. Five of the measures focus exclusively on the trustor's beliefs (Cummings and Bromiley; Brockner *et al*; Shockley *et al*, Huff and Kelley, Tzafrir and Dolan). Interestingly, Cummings and Bromiley (1996, p. 317) omitted from their short-form inventory the items from their long-form measure pertaining to intended behaviour (mostly covering performance monitoring and disclosure), because "singularly, and on the average, [they] exhibited lower item-to-factor correlations than did the affective and cognitive items" [i.e. of the trust belief]. So, while the short-form measure is highly reliable in tapping these specific affective and cognitive aspects, the framework presented above does suggest that this leaves us with only partially helpful information.

We found no measure tapping trust-informed risk-taking behaviours. One measure combined items for beliefs with related intentions to act (as does Cummings and Bromiley's long-form measure). Clark and Payne's instrument comprises 26 pairs of items, the first testing for the respondent's "belief" and the second for a corresponding "intention to act" directly as a consequence of that belief. This design feature links the two forms of trust in the respondent's mind clearly and compellingly. Gillespie's measure was designed specifically to assess the decision to trust, and the items are worded as behavioural intentions ("how willing are you to . . ."), split evenly into two categories: "reliance" (items 1-5) and "disclosure" (items 6-10). It is designed to be used in conjunction with "belief" measures. Again, however, a respondent's assessment of her/his decision to trust is a necessarily speculative one; it is not a guaranteed behavioural response.

Six of the research designs contained separate measures for the respondent's "post-trust" behaviours, but the future behaviours investigated do not necessarily follow directly and exclusively from an individual's trust in another. Robinson's measures of respondents' "civic virtue" (a form of organisational citizenship behaviour) and "intentions to remain"; Brockner and colleagues', and Tzafrir and Dolan's questions about respondents' organisational commitment; Tyler's "deference to rules" and McAllister's measures for the respondent's "assistance-oriented citizenship behaviour" toward the other party can all (in part) be inspired by reasons other than trust. Hence, they ought not to be viewed as trust-related. Only McAllister's "monitoring and defensive behaviour" reflects a willingness to render oneself

vulnerable, if reverse-coded. Spreitzer and Mishra's research design presented managers' "willingness to allow "lower-echelon employees" to participate in organisational decision-making" as a risky act for those managers, although the three items in the relevant scale seem not to reflect vulnerability at all. The same managers' non-recourse to two "substitutes" for trust (performance monitoring, and offering compliance-inducing incentives) may also be interpreted as intentions to act on the basis of trust.

The content of the trust belief
If an item captured one component only that component received a full mark; if the item captured two components, both received half a mark apiece, and so on. From this we derived a simple percentage figure for each content component's presence in the measure overall (Appendix 1).

The measures cover the four content components in interesting ratios. Matters of "integrity" are observed most frequently overall. Cummings and Bromiley's measure is particularly strong on integrity (58 per cent). The clear emphasis is also on integrity in Robinson's measure (50 per cent), and in Clark and Payne's (34 per cent of the trust-related items). In each of these cases, benevolence is the second most significant element (21, 21 and 28 per cent, respectively). Benevolence was the largest content component in the measures produced by Tyler (57 per cent), Tzafrir and Dolan (44 per cent), Spreitzer and Mishra (28 per cent) and McAllister (27 per cent). We found the latter, and the Shockley-Zalabak *et al.* measure, notably low on integrity. In the latter's case, their conceptualisation presents "openness and honesty" as an equivalent to integrity, but few of the relevant items (1-10) seem to capture the essence of integrity according to our terms. Spreitzer and Mishra did not conceptualise integrity, preferring "openness", though we found clear overlaps between their items for "openness" and our definition of integrity. Tzafrir and Dolan – also eschewed integrity[5], but we found traces of honesty and fair treatment in several of the items reflecting the three content components they did identify, namely "harmony", reliability and concern. Shockley-Zalabak *et al.* 's "identification" is similar in concept to Tzafrir and Dolan's harmony, and they operationalised it as a separate element. Indeed, in our analysis we could not assign any of the relevant items (41-45) to one of the other content components.

The surprisingly common omission, or marginalisation, of "competence" is striking, and is all the more curious given its prominence in most conceptualisations (Mayer *et al.*, 1995). Competence is not covered at all in the measures from Robinson and Tyler (although the latter's research featured a separate measure for the "competence" of the employing organisation). Nor does it feature prominently in Clark and Payne's, Cummings and Bromiley's, and Brockner and colleagues' measures. It appears only indirectly for Tzafrir and Dolan as a consequence of our interpretation of their measure. (In their factor analysis they merged "ability" with "harmony".) Competence is given due prominence by Mayer and Davis, Gillespie[6] and Shockley-Zalabak *et al.*

"Predictability" is also seemingly a peripheral element in measures of another's trustworthiness, particularly for Clark and Payne, and Mayer and Davis. Tyler measured it separately. One explanation is that it features in relatively few conceptualisations. It is not in Mayer *et al.* (1995), for example. However, this marginal status for assessments of the other's consistency and reliability is surely odd.

One interesting observation is the weightings assigned to each of the content components (Appendix 1). The distribution is most even in Spreitzer and Mishra's, and Gillespie's measures. These two also have the most balanced proportions, although several of Gillespie's items seem to tap the different components at the same time[6]. Mayer and Davis neglect predictability, but they cover the remaining three components more or less equally.

Huff and Kelley's measure and Brockner and colleagues' second study are examples of "general" uni-dimensional trust measures, in which the four content components do not appear to be tapped explicitly. The framework presented above suggests that items inviting only a broad-brush appraisal, with no distinction possible between the four content components and no opportunity to reflect upon different domains or scenarios, are likely to be, for most research questions and purposes, insufficiently precise and problematic. Put simply, general items rather beg the question: trust them when and to do what? Hence, we argue for the importance of tapping different content components and work scenarios.

Finally, we found a number of items uncategorisable. For example, items 3 and 5 in McAllister's measure seem not to address any element of trust as such (at least, as presented here), but instead are more concerned with sentiments of affection and regret, while one might be "listened to" by one's line manager or colleagues (items 20 and 31 in the instrument developed by Shockley-Zalabak's team) for entirely practical reasons rather than, say, out of benevolence or a desire to demonstrate integrity. Moreover, items 4 and 6 would appear to indicate the referent's trust in the respondent, and not the other way round: similarly for Spreitzer and Mishra's item 12.

Source(s) of the belief
Another striking finding concerns the assumptions about the sources of evidence for the respondent's beliefs about the referent. The (assumed) focus is very much on interpersonal sources, and in particular on the trustor's perceptions of the conduct and character of the trustee. The trustee is assumed to be fully autonomous, whose trustworthiness can be attributed directly to her/his/their actions. This is the case for Brockner and colleagues, and for Clark and Payne, although in a recent paper, Payne and Clark (2003) have addressed the three separate sources of trust directly. Overall, most measures seem to examine the past conduct of the referent more than character (a notable exception being Spreitzer and Mishra). Curiously, however, this relative inattention to matters of character is rather at odds with our findings on content, and the pronounced emphasis on integrity.

Three of the research designs made use of measures for the trustor's pre-disposition to trust (Mayer and Davis, Huff and Kelley and Gillespie). Huff and Kelley also asked questions about the respondent's trust in in-groups and out-groups, and about certain cultural norms (e.g. an "individualism-collectivism orientation"). Although the content of Robinson's measure does not suggest any source(s) other than the personal character and work performance of the referent, her research design – testing new recruits' trust prior to appointment – meant that a proxy for pre-disposition was incorporated.

As for other sources of evidence, McAllister's items (1, 3 and 5) require the trustor to conduct an appraisal of the quality of the relationship with the trustee, and the research design included a measure on "interaction frequency". Gillespie also gathered comprehensive information on the nature and quality of the relationship, including

multiple items on "common values" and "common goals", "interdependence", "risk in the relationship", "strength of the relationship" and finally a single item on "relationship effectiveness".

The referent: who is being trusted?
The measures examine six different work-based relationships:

(1) between an employee/employees and her/his immediate manager or managers (e.g. Tyler; Gillespie; Tzafrir and Dolan; Spreitzer and Mishra);

(2) between an employee and one immediate work colleague (e.g. McAllister; Gillespie);

(3) between an employee and her/his "employer" (e.g. Robinson), or with "management" representing "the employer" (e.g. Clark and Payne; Mayer and Davis; Tyler);

(4) between an employee and the rest of the organisation (e.g. Huff and Kelley);

(5) between organisational departments (e.g. Cummings and Bromiley); and

(6) multiple relationships throughout the organisation (Shockley-Zalabak *et al.*).

Recalling Mayer and Davis' (1999,p. 124) requirement that for the theory of trust to hold true, "the trustee must be specific, identifiable and perceived to act with volition", we would make three observations. The first is the problem of respondents being asked to bundle their assessments of the trustworthiness of a large group of people into one composite view. In Cummings and Bromiley's inventory of trust between different functional departments inside the same organisation, the respondent is expected to be sufficiently experienced and informed enough to appraise her/his own department's collective assessment (i.e. not her/his own view) of another organisational department *en masse,* aggregating impressions of every member of that department into an overall assessment of the department's perceived trustworthiness. (It should be pointed out, however, that other researchers have adapted Cummings and Bromiley's measure for examining interpersonal trust.) Huff and Kelley's "internal trust" instrument asks respondents to assess trust throughout the entire organisation, as do several items in the Shockley-Zalabak *et al.* measure. Spreitzer and Mishra's measure covers all "employees". Though this may fulfil the requirements of the research problem in each case, it does seem, in the light of our framework, to be problematic.

Second, and related, is that the referent in many measures is somewhat ambiguous, and we wonder who each respondent had in mind when answering the questions. For example, respondents for the Robinson measure are invited to assess her/his "employer". At what organisational level might the respondent have identified the personification of their employer: "the company", its senior managers, her/his own line manager? And would they have kept the same referent in mind for each of the items, or might they have shifted? By contrast, the Mayer and Davis survey referred to "top management" then named them in brackets "for clarity".

Third, in some measures the identity of the referent is inconsistent throughout the items. For example, in Shockley-Zalabak *et al.*'s case, the referent switches from immediate supervisor to co-workers to peers to management to top management, and to the whole organisation (see too the different referents in Tyler; Clark and Payne;

Brockner and colleagues' first and third studies). Our framework suggests that these measures are likely to be tapping potentially very different relationships.

Other remarks
McAllister's (1995) explicit distinction between affect-based trust (his items 1-5) and cognition-based trust (items 6-11) does not seem to have been widely incorporated into other research designs. Enduring uncertainties exist about the distinction and about the way the two are related. Cummings and Bromiley set out to divide their measure equally into affectively-worded and cognitively-worded items. However, Clark and Payne removed all the affective items from their initial pool of 78, since these correlated very highly with the corresponding "belief"-worded (i.e. cognitive) items. In any case, their respondents seemed to have trouble with the two different qualities of trust present in the negatively-keyed items. Clark and Payne (1997, p. 211) hint at a need for "more subtlety" in the design of measures. For our part, we would suggest that it is helpful instead to re-conceptualise trust as always a cognitive judgement (except perhaps in its "identification-based" degree), but that in its higher forms the judgement is accompanied by, but not necessarily shaped by, an emotional response[7]. This reflects the sequence of cognition, affect and intention to act put forward by Fishbein and Azjen (1975). Recent neurological research into how the brain processes judgements on trustworthiness appears to support the view that trust has both a cognitive and an affective aspect (Adolphs, 2002; Winston *et al.*, 2002).

In each of the measures the majority of items are positively worded, reflecting the idea that trust is indeed a positive state of mind. However, almost half the scales produced by Robinson and by Cummings and Bromiley are negatively worded (three items out of seven, and five items out of 12, respectively).

A number of items fall foul of the Cummings and Bromiley(1996) ban on the use of words featuring in some way "trust". Examples include Brockner *et al.*'s first study, Huff and Kelley's measure for internal trust, and two of McAllister's eleven items.

Finally, we would note that since trust is incremental, dynamic and continuous (Lewicki *et al.*, 1998) – a party's trust in another goes up and down, or rather is enhanced or damaged, in large part according to what the other party does – this suggests that longitudinal research designs, tracking shifts in trust over a significant period, will provide richer evidence than one-off "snap-shots" which are prone to the distorting impact of recent events. Three of the studies used longitudinal methods (Robinson, Gillespie and Mayer and Davis).

Concluding remarks
This paper has attempted to contribute to the development of stronger measures for the complex multi-dimensional construct of intra-organisational trust. We did so by content-analysing 14 existing measures against criteria implied by the existing theory and conceptualisation found in the management literature: the different forms that trust can take, the content of the trust judgement, the sources of evidence for trust, the identity of the referent, and the different qualitative degrees of trust. Our findings have illuminated a number of "gaps" between the present conceptualisation and different operationalisations. We summarise these below.

On the forms that trust can take, most measures are of the trustworthiness belief. Yet an intention to trust is a stronger predictor of future behaviour than solely

an assessment of another's trustworthiness (Gillespie, 2003), and behavioural estimation items have been found to be strongly predictive of actual behaviour (Armitage and Connor, 2001). Moreover, knowing A's intentions to act can help researchers and practitioners alike to better predict likely A's future behaviour (Albrecht and Travaglione, 2003, p. 78). Hence, one recommendation arising from this is to include, alongside "belief" items, measures tapping the respondent's positive and willing "decision" to trust, their "intention to act". Such items should, ideally, follow directly as an outcome of the "belief", and might include items on reliance and disclosure, and deliberately reduced monitoring, or relaxing of controls. However, of further interest here is whether the intention to act is translated into actual risk-taking behaviours. This "gap" is ripe for research. Better still, therefore, might be measures tapping actual trust-informed, risk-taking behaviours, an example being "I rarely check X's work for accuracy" (Dietz, 2005).

In terms of content, we noted the dominance of judgements on the trustee's integrity and benevolence, and the relatively marginalised status of the trustee's competence and predictability. This apparent bias may prove problematic. Indeed, one future research agenda would be to test which of these is most significant, in what circumstances. Very little research assesses whether the importance of these components varies where different actors in organisations are concerned. Does trusting a peer involve the same components to the same degree as trusting a supervisor? Relatedly, the common assumption across the studies appears to be that different work relationships witness different forms of trust, requiring, it seems, different measures. Is this the case? Can a generally applicable measure be conceived and tested?

On the subject of the identity of the referent, we recognise that this will of course vary, depending on the research question. However, since trust levels vary according to who is participating in the relationship (i.e. at different organisational levels), and will vary according to circumstances and situations, it does remain crucial to be specific about the exact referent or group of referents in the wording of the items, and to remain consistent throughout the items, or to analyse the different relationships separately.

Finally, the decision to trust is based on a huge amount of often-conflicting evidence. While the majority of the measures focus, reasonably, on the conduct and character of the trustee as being decisive, we would urge researchers to also consider external factors constraining the trustee's behaviour. This is important, since a failure to account for these may lead researchers to assign too great an effect to the input provided by the trustee, and/or to any trust-influencing independent variable (such as an HRM intervention). On this point, Bijlsma-Frankema and Koopman (2003) sensibly invoke the principle of "bounded rationality", that people are only capable of processing a finite number of "cues" (whether micro-level or macro-level) to the other party's trustworthiness. This begs the question: which "cues" are the most important in work settings? All of these questions suggest fruitful future research agendas.

Although researchers should obviously design or select their scales to match the particular research problem or question they are interested in exploring, our review does suggest that more work needs to be done to improve both our understanding of trust, and our measurement tools. It is hoped that the findings suggest where the content of existing measures do match the conceptualisation, and where improvements can be made.

Notes

1. On this point, Bijlsma-Frankema and van de Bunt (2003) argue that certain mechanisms of managerial monitoring of employees' performance might in fact be indicators of trust in the sense that checking for adequate performance demonstrates a manager's competence.

2. Other authors have incorporated alternative dimensions. These include "openness" (Spreitzer and Mishra, 1999) instead of integrity. For our analysis, we considered openness – in the sense of being honest, sincere and candid, and rarely if ever deceitful – to be a sub-set of integrity. Both Shockley-Zalabak *et al.* (2000) and Tzafrir and Dolan (2004) also conceptualised, and operationalised, a kind of value congruence as a distinct content component of trust ("identification" and "harmony", respectively). Yet we would argue, with Axelrod (1984) and Misztal (1995, p. 72), that parties need not necessarily share a value system, nor even an enduring common agenda, to trust each other. A calculative self-interest in the outcome of the next few interactions can be sufficient even for enemies to develop trust, as when trench-bound British and German soldiers during the First World War struck up repeated unwritten, in fact often unspoken, agreements not to fire at each other. This was also notable for being in defiance of their superiors' orders (Axelrod, 1984, pp. 73-87).

3. This can be illustrated with a few short scenarios. One would not ordinarily trust someone one knows to be harbouring plans to harm us. Nor would one trust someone of dubious moral character, or someone whose future actions cannot be predicted. But, one would also be reluctant to trust a person of impeccable moral reputation, and only the best of intentions, if one knows that that person is either incompetent, or unable to fulfil their trust-based promises to us or realise their stated goals (Jones, 1996, pp. 6-7). Similarly, a competent, kind and predictable person might not be worthy of trust if one knows them to be capable of ethically questionable decisions. Finally, the same reservations might apply to a technically able, well-meaning and honest person if their likely actions happen to be too unpredictable.

4. More measures exist, of course. Cook and Wall's (1980) six-item scale is still regularly used (Gould-Williams, 2003; Kiffin-Petersen and Cordery, 2003; Connell, Ferres and Travaglione, 2003), as is Roberts and O'Reilly's (1974) four-item scale (used by Korsgaard *et al.*, 1995). Other recently published measures include the single-item measure, "Management at this workplace can be trusted to tell things they way they are" with a 1-3 Likert scale, plus a "Don't know" option, as used by Blunsdon and Reed (2003) and Morgan and Zeffane (2003). See too the scales developed by Bijlsma-Frankema and van de Bunt (2003), Costa *et al.* (2001) and Costa (2003), and Aryee *et al.* (2002). Moreover, we have not covered measures for inter-organisational trust (see among many Luo, 2002; Zaheer *et al.*, 1998).

5. Tzafrir and Dolan arrived at their set of content components having interviewed 185 employees to discover inductively people's common understanding of what constitutes judgements based on trust. Interestingly, "integrity" was not considered a pertinent feature at all.

6. All the items in Gillespie's measure reflect an "intention to act", and it is designed to be used in conjunction with a separate measure for "beliefs". So, while a content-analysis is inappropriate – given that it is not a measure of beliefs – we nevertheless examined for interest the assumptions implied in the items that the trustor might be expected to make about the trustee, which inform the "intention to act": in other words, how the items seem to reflect indirectly the respondent's likely beliefs.

7. Looking again at the affective-cognitive split in McAllister's measure in the light of the discussion on content, we are struck by some curiosities. The affective section seems to deal with "benevolence" only, whereas one might expect the trustee's "integrity" to also inspire an emotional response in the trustor. Instead, the judgements on "integrity" are grouped with the cognitive-based items, although most of the items seem to us to be affectively worded. As well as integrity, the cognitive items also reflect "predictability" and "competence", but they

do not appear to offer a calculative assessment of the party's motives (i.e. "benevolence"). In other words, the measure seems to imply that one does not assess another party's integrity on an emotional level, and nor does one calculate another's motives. This seems odd, especially if, as McAllister (1995, p. 51) argues , affective judgements emerge only after sufficient cognitive evaluation. The implied postponement of an evaluation of the other party's motives until relatively late in the relationship seems theoretically inappropriate, and practically ill-advised.

8. (NB: The measure upon which the analysis is based does not appear in the paper; it was requested from the first author. IABC, the International Association of Business Communicators, holds the copyright).

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Appendix 1. Summary of the 14 measures

Author	Referent	Belief/decision/action	Content distribution (per cent)	Source(s) of trust	+ ve/− ve items (precent), use of "trust" (per cent)
McAllister (1995) 11 items	A work colleague (peer)	Belief	Benev. = 27 Comp. = 22 Integ. = 9 Pred. = 13 Gen. = 18 Uncat. = 18	Referent's qualities and performance [Also, various characteristics of the relationship]	− ve items: 10 Use of "trust": 18 (2 items)
Robinson (1996) 7 items	"Employer"	Belief	Benev. = 21 Comp. = 0 Integ. = 50 Pred. = 14 Gen. = 14	Referent's qualities and performance	− ve items: 43 Use of "trust": 14 (1 item)
Cummings and Bromiley (1996) 12 items	Other departments	Belief	Benev. = 21 Comp. = 4 Integ. = 58 Pred. = 16	Referent's qualities and performance	− ve items: 41 Use of "trust": 0
Clark and Payne (1997) 23 items	Several: "employer"/management/most managers	Belief & decision	Benev. = 28 Comp. = 17 Integ. = 34 Pred. = 8 Uncat. = 4	Referent's qualities and performance	− ve items: 21 Use of "trust": 0
Brockner et al. (1997) 7 items (3, 2, and 2 split across the 3 studies)	"Employer"	Belief	Benev. = 21 Comp. = 7 Integ. = 14 Pred. = 7 Gen. = 50	Referent's qualities and performance	− ve items: 0 Use of "trust": 85 (6 items)
Mayer and Davis (1999) 21 items (4 on general trust only)	Top management	Belief (also implied actions in some items?)	Benev. = 26 Comp. = 31 Integ. = 24 Pred. = 4 Gen. = 14	Referent's qualities and performance [Also, trustor's pre-disposition]	− ve items: 14 Use of "trust": 0

(continued)

Table AI.

Table AI.

Author	Referent	Belief/decision/action	Content distribution (per cent)	Source(s) of trust	+ve/−ve items (precent), use of "trust" (per cent)
Spreitzer and Mishra (1999) 16 items	Employees in general	Belief	Benev. = 28 Comp. = 25 Integ. = 22 Pred. = 19 Uncat. = 6	Referent's qualities and performance.	−ve items: 0 Use of "trust": 0
Shockley-Zalabak et al. (2000)[8] 45 items	Several: superviser, co-workers, peers, management, senior/top management, and the whole organisation.	Belief (also implied Actions?)	Benev. = 23 Comp. = 22 Integ. = 13 Pred. = 11 Gen. = 0 Uncat. = 24	Referent's qualities and performance [Also trustor's value-congruence with referent]	−ve items: 13 Use of "trust": 0
Tyler (2003) 7 items	Top management and immediate superviser	Belief	Benev. = 57 Comp. = 0 Integ. = 35 Pred. = 7	Referent's qualities and performance.	−ve items: 0 Use of "trust": 0
Huff and Kelley (2003) 4 items	Everyone in the participating organisation	Belief	Benev. = 0 Comp. = 12.5 Integ. = 12.5 Pred. = 0 Gen. = 75	Referent's qualities and performance [Also, trustor's pre-disposition to trust and distrust; trust in in-group and out-group; cultural norms]	−ve items: 0 Use of "trust": 100 (4 items)
Gillespie (2003) 10 items	Immediate superviser; team member	Decision	Benev. = 28.3 Comp. = 33.3 Integ. = 18.3 Pred. = 20	Referent's qualities and performance [Also, trustor's pre-disposition, and various characteristics of the relationship]	−ve items: 0 Use of "trust": 0
Tzafrir and Dolan (2004) 16 Items	"Specific core" employees or managers (as a collective group)	Belief	Benev. = 44 Comp. = 12.5 Integ. = 28 Pred. = 15	Referent's qualities and performance	−ve items: 19 (3 items) Use of "trust": 0

Appendix 2

McAllister (1995) – items	Trust content
1. We have a sharing relationship. We can both freely share our ideas, feelings and hopes	Benevolence
2. I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen	Benevolence
3. We would both feel a sense of loss if one of us was transferred and we could no longer work together	?
4. If I shared my problems with this person, I know that (s)he would respond constructively and caringly	Benevolence
5. I would have to say that we have both made considerable emotional investments in our working relationship	?
6. This person approaches her/his job with professionalism and dedication	Competence
7. Given this person's track record, I see no reason to doubt her/his competence and preparation for the job	Competence
8. I can rely on this person not to make my job more difficult by careless work	Predictability/competence
9. Most people, even those who aren't close friends of this individual, trust and respect her/him as a co-worker	General
10. Other work associates of mine who must interact with this individual consider her/him to be trustworthy	General
11. If people knew more about this individual and her/his background, they would be more concerned and monitor her/his performance more closely	Integrity [r/c]

Table AIII.

Robinson (1996): trust measure items	Trust content
1. I believe my employer has high integrity	Integrity
2. I can expect my employer to treat me in a consistent and predictable fashion	Predictability
3. My employer is not always honest and truthful	Integrity [r/c]
4. In general, I believe my employer's motives and intentions are good	Benevolence
5. I don't think my employer treats me fairly	Integrity/benevolence [r/c]
6. My employer is open and upfront with me	Integrity
7. I'm not sure I fully trust my employer.	General [r/c]

	Trust content
Cummings and Bromiley (1996) – items [a]	
1. We think the people in (__) tell the truth in negotiations	Integrity
2. We think that (__) meets its negotiated obligations to our department	Predictability/competence
3. In our opinion, (__) is reliable	Predictability
4. We think that the people in (__) succeed by stepping on other people	Integrity [r/c]
5. We feel that (__) tries to get the upper hand	Benevolence [r/c]
6. We think that (__) takes advantage of our problems	Benevolence [r/c]
7. We feel that (__) negotiates with us honestly	Integrity
8. We feel that (__) will keep its word	Predictability/integrity
9. We think that (__) does not mislead us	Integrity
10. We feel that (__) tries to get out of its commitments	Integrity [r/c]
11. We feel that (__) negotiates joint expectations fairly	Integrity
12. We feel that (__) takes advantage of people who are vulnerable	Benevolence/integrity [r/c]
Clark and Payne (1997) – items [b]	
1. Most managers are honest and truthful about information to do with the job	Integrity
2. I believe that I will act as though managers are honest	[Intention to act]
3. Management are sincere in their attempts to meet the workers' point of view about the job	Benevolence/integrity
4. In the future I will behave as though managers are sincere	[Intention to act]
5. I believe that most managers will keep their word about rewards offered for completion of a task	Integrity/predictability
6. In the future I expect to be able to believe that managers will keep their word	[Intention to act]
7. I believe what I am told by management about future plans for the colliery	Integrity
8. In the future I will believe what management tells me about future plans	[Intention to act]
9. Most managers are incompetent at managing the workers	Competence [r/c]
10. In the future I will behave as though managers are incompetent	[Intention to act]

Table AIV.

	Trust content
11. Management are competent when it comes to matters of safety on the job	Competence
12. In the future I expect to be able to rely on managers to look after safety on the job	[Intention to act]
13. Management show good judgement when making decisions about the job	Competence
14. In the future I will rely on management making good decisions	[Intention to act]
15. Most managers do not understand when a worker should be rewarded for a job well done	Benevolence [r/c]
16. In the future I will not expect to be rewarded for a job well done	[Intention to act]
17. Management make decisions that threaten the future of our pit	Benevolence/competence [r/c]
18. In the future I do not expect the pit to be successful unless management make better decisions	[Intention to act]
19. I believe that managers apply the same rules for all workers	Integrity/predictability
20. In the future I will act as though many managers apply the same rules to all workers	[Intention to act]
21. I believe that management treat workers fairly	Integrity
22. In the future I will act as if management treats workers fairly	[Intention to act]
23. Management can be relied upon to reward workers for their achievements	Predictability/benevolence
24. In the future I will act as if management reward workmen for their efforts	[Intention to act]
25. I can rely on management to do what is best for the long-term survival of the pit	Benevolence/competence
26. In the future I will rely on managers to act in the best interests of the pit	[Intention to act]
27. My actions are supported by the manager in charge of the job	Benevolence
28. In the future I will act as though managers support my actions	[Intention to act]
29. I can rely on management to try to help me out when I run into difficulties with the job	Benevolence (?)/predictability
30. In the future I will rely on management to help me out when I run into difficulties	[Intention to act]
31. Management takes the credit for success without acknowledging the workmen's contribution	Benevolence [r/c]
32. In the future I will act as if management do not give praise for a good job	[Intention to act]
33. Most managers show little appreciation of the future interests of the men	Benevolence [r/c]
34. In the future I will act as if management are concerned about the men's interests	[Intention to act]
35. Management listen to my suggestions about how the job should be done	?

(continued)

Table AIV.

	Trust content
36. In the future I will act as though managers listen to my suggestions	[Intention to act]
37. Most managers do not openly share ideas and information about the job with the workmen	Integrity
38. In the future I will behave as though managers do not openly share job information	[Intention to act]
39. Most managers have shown that I can express my opinions and not hold them against me	Integrity/Predictability
40. In the future I will keep my opinions to myself	[Intention to act]
41. Most managers openly share information on matters affecting incentive payments	Integrity
42. In the future I will behave as though managers do not openly share information	[Intention to act]
43. Management openly share information about future plans	Integrity
44. In the future I will behave as though managers do not openly share future plans	[Intention to act]
Brockner et al. (1997): Trust measure 1 – items	
1. I can usually trust my supervisor to do what is good for me	Benevolence/predictability
2. Management can be trusted to make decisions that are also good for me	Benevolence/competence
3. I trust the management to treat me fairly	Integrity
Brockner et al. (1997): Trust measure 2 – items	
1. Trustful _ (1-5) _- Distrustful	General
2. Family-like _ (1-5) _ Uncaring	General/benevolence
Brockner et al. (1997): Trust measure 3 – items	
1. I trust local [name of company] management	General
2. I trust corporate [name of company] management	General
Spreitzer and Mishra (1999) - *items:*	
"I trust that employees..."	
1. ... are completely honest with me	Integrity/predictability
2. ... place our organisation's interests above their own	Benevolence
3. ... will keep the promises that they make	Integrity/predictability
4. ... are competent in performing their jobs	Competence
5. ... express their true feelings about important issues	Integrity/predictability
6. ... care about my well-being	Benevolence
7. ... can contribute to our organisation's success	Competence
8. ... take actions that are consistent with their words	Integrity/predictability
9. ... share important information with me	Benevolence/integrity
10. ... care about the future of our organisation	Benevolence
11. ... can help solve important problems in our organisation	Competence
12. ... have consistent expectations of me	?
13. ... would make personal sacrifices for our organisation	Benevolence
14. ... would acknowledge their own mistakes	Integrity
15. ... can help our organisation survive [through the 1990s]	Competence
16. ... can be relied on	Predictability

Table AIV.

	Trust content
Mayer and Davis (1999) - items:	
1. Top management is very capable of performing its job	Competence
2. Top management is known to be successful at the things it tries to do	Competence
3. Top management has much knowledge about the work that needs done	Competence
4. I feel very confident about top management's skills	Competence
5. Top management has specialised capabilities that can increase our performance	Competence
6. Top management is well qualified	Competence
7. Top management is very concerned about my welfare	Benevolence
8. My needs and desires are very important to top management	Benevolence
9. Top management would not knowingly do anything to hurt me	Benevolence
10. Top management really looks out for what is important to me	Benevolence
11. Top management will go out of its way to help me	Benevolence
12. Top management has a strong sense of justice	Integrity
13. I never have to wonder whether top management will stick to its word	Integrity
14. Top management tries hard to be fair in dealings with others	Integrity
15. Top management's actions and behaviours are not very consistent	Predictability [r/c]
16. I like top management's values	Integrity
17. Sound principles seem to guide top management's behaviour	Integrity
18. If I had my way, I wouldn't let top management have any influence over issues that are important to me	Intention to Act?/general [r/c]
19. I would be willing to let top management have complete control over my future in this company	Intention to Act?/General/Benevolence
20. I really wish I had a good way to keep an eye on top management	Intention to Act?/general [r/c]
21. I would be comfortable giving top management a task or problem which was critical to me, even if I could not monitor their actions	Intention to Act?/general/competence
Shockley-Zalabak et al. (2000) – items:[c]	
1. I can tell my immediate superviser when things are going wrong	Benevolence/integrity
2. I am free to disagree with my immediate superviser	Benevolence?
3. I am free to disagree with my co-workers	Benevolence?
4. I have a say in decisions that affect my job	?
5. My immediate superviser avoids gossip	Integrity
6. The organisation encourages differences of opinion	?
7. Management gives direction and clarification before our organisation takes action	Competence
8. In our organisation, one should not hesitate to offer his/her own opinion	?

(*continued*)

Table AIV.

	Trust content
9. In our organisation, people tell the truth even if it is unpleasant	Integrity
10. We openly share "all" the relevant information; nothing is held back	?
11. In our organisation, people are competent in their jobs	Competence
12. We get the job done right	Competence
13. In our organisation, someone is always checking up on you	Competence [r/c]
14. We accomplish our goals	Competence
15. We are highly skilled at what we do	Competence
16. We are highly satisfied with the overall efficiency of operation	Competence/predictability
17. We are highly satisfied with the overall quality of the products/services of the organisation	Competence
18. We are highly satisfied with the capacity of the organisation to achieve its objectives	Competence
19. We are highly satisfied with the capability of the organisation's employees	Competence
20. My immediate superviser listens to me	?
21. Top management is sincere in their efforts to communicate with employees	Benevolence
22. My immediate superviser is sincere in his/her efforts to communicate with team members	Benevolence
23. Top management listens to employees' concerns	Benevolence
24. My immediate superviser is concerned about my personal well-being	Benevolence
25. Top management is concerned about employees' well-being	Benevolence
26. My immediate superviser avoids retaliation when mistakes have been made	Benevolence
27. My immediate superviser takes unfair advantage of subordinates	Benevolence [r/c]
28. My immediate superviser attempts to makes himself/herself look good at the expense of others [r/c]	Benevolence/integrity
29. Those in top management keep their word to employees	Benevolence/integrity
30. My immediate superviser takes all the credit, gives none	Benevolence/integrity [r/c]
31. In our organisation someone will always listen to you	?
32. In our organisation most people are looking out for themselves only	Benevolence [r/c]
33. My immediate superviser follows through with what he/she says	Predictability
34. My immediate superviser behaves in a consistent manner from day to day	Predictability
35. Top management keeps its commitments to employees	Predictability/integrity
36. Those in top management keep their word to employees	Predictability/integrity
37. My immediate superviser keeps his/her commitments to team members	Predictability/integrity
38. My immediate superviser keeps confidences	Predictability/integrity/benevolence
39. In our organisation people follow through with their commitments to each other	Predictability

Table AIV. (*continued*)

	Trust content
40. In our organisation, employees' progress must be closely monitored to ensure that commitments are met	Predictability/competence [r/c]
41. I feel connected to my peers	[Identification]
42. I feel connected to my organisation	[Identification]
43. I feel connected to my immediate superviser	[Identification]
44. My values are similar to the values of my peers	[Identification]
45. My values are similar to the values of my immediate superviser	[Identification]

Huff and Kelley (2003) – items:

1. There is a very high level of trust throughout this organisation	General
2. In this organisation subordinates have a great deal of trust for managers	General
3. If someone in this organisation makes a promise, others within this organisation will almost always trust that the person will do his or her best to keep the promise	General/integrity
4. Managers in this company trust their subordinates to make good decisions	General/competence

Tyler (2003) – items:

1. I am usually given an honest explanation for decisions	Integrity/predictability
2. My views are considered when decisions are made	Benevolence
3. My needs are taken into account when decisions are made	Benevolence
4. The authorities try hard to be fair to their employees	Integrity
5. My superviser gives me an honest explanation for decisions	Integrity
6. My superviser considers my views when decisions are made	Benevolence
7. My superviser takes account of my needs	Benevolence

Gillespie (2003) – items:[a][6]
"How willing are you to..."

1. ... rely on your leader's work-related judgements?	Competence/predictability
2. ... rely on your leader's task-related skills and abilities?	Competence/predictability
3. ... depend on your leader to handle an important issue on your behalf?	Benevolence/competence/predictability
4. ... rely on your leader to represent your work accurately to others?	Benevolence/competence/predictability
5. ... depend on your leader to back you up in difficult situations?	Benevolence/competence/predictability
6. ... share your personal feelings with your leader?	Benevolence/competence/integrity
7. ... confide in your leader about personal issues that are affecting your work?	Benevolence/competence/integrity
8. ... discuss honestly how you feel about your work, even negative feelings and frustration?	Benevolence/competence/integrity
9. ... discuss work-related problems or difficulties that could potentially be used to disadvantage you?	Benevolence/competence/integrity
10. ... share your personal beliefs with your leader?	Benevolence/integrity

Tzafrir and Dolan (2004) – 16 items:

1. Managers'/employees' needs and desires are very important to employees/managers	Benevolence

Table AIV.

	Trust content
2. I can count on my employees/managers to help me if I have difficulties with my job	Benevolence
3. Employees/managers would not knowingly do anything to hurt the organisation	Benevolence
4. My employees/managers are open and upfront with me	Integrity
5. I think that the people in the organisation succeed by stepping on other people	Integrity [r/c]
6. Employees/managers will keep the promises they make	Integrity/predictability
7. Employees/managers really look out for what is important to the managers/employees	Benevolence
8. Employees/managers have a lot of knowledge about the work that needs to be done	Competence
9. Employees/managers are known to be successful in the things they attempt to accomplish	Competence
10. If I make a mistake, my employees/managers are willing to "forgive and forget"	Benevolence/integrity
11. Employees'/managers' actions and behaviours are not consistent	Predictability [r/c]
12. Employees/managers take actions that are consistent with their words	Integrity/predictability
13. It is best not to share information with my employees/managers	Benevolence/integrity [r/c]
14. There is a lot of warmth in the relationships between the managers and workers in this organisation	Benevolence
15. Employees/managers would make personal sacrifices for our group	Benevolence
16. Employees/managers express their true feelings about important issues	Integrity/predictability

Notes: [a] The authors wish to thank Philip Bromiley for kind permission to reproduce the measure; [b] A further four items were included in the final instrument. These related to a sentiment closely associated with trust, namely "respect", and they were included after input from the respondents themselves. But, interestingly, respect was not found to be related to trust in the statistical analysis; [c] The authors wish to thank Pamela Shockley-Zalabak for kind permission, on behalf of IABC, to reproduce the measure; [d] The authors wish to thank Nicole Gillespie for kind permission to reproduce the measure

Table AIV.

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