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Refuting the cliché of the distrustful manager

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ABSTRACT

Although trust is fundamental to social and organizational functioning, the media often portray managers as distrusting, suggesting that distrust of others is a typical personality variable of successful leaders. This study puts the cliché of the distrustful manager to the test. Both self-report data (N=32,926) and behavioral data (N=924) from the German Socio-Economic Panel refute this cliché. Analyses reveal that individuals in managerial positions neither show a lower level of trust before, nor a systematic reduction in trust after attaining such positions. Moreover, analyses demonstrate that managers are generally more trusting than non-managers. This selection effect implies that individuals who trust others are more successful in achieving managerial positions than their less trusting counterparts. © 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Media reports and business guidebooks often appear to assume a high degree of skepticism toward other people as either an inherent characteristic of successful managers or a side effect of becoming a manager (Beer, 2004; Bhote, 2002; Gulati, 2014; Meck, 2014). Co-founder of Intel Andrew Grove (1996), for instance, authored the strikingly titled book *Only the Paranoid Survive*. The commonplace phrase *lonely at the top* also implies that managers lack colleagues who they can trust and who are honest with them (Douglas, 2012). In line with this media coverage, we found in a short online survey of 87 German professionals that 63.2% of

respondents considered managers generally distrusting of others, whereas only 36.8% described managers as generally trusting. Using the same dichotomous question for non-managers, only 29.9% of respondents regarded non-managers as generally distrusting, and 70.1% considered non-managers generally trusting of others.

From a historical perspective, caution against trust has already been expressed in important works from philosophers like Niccolò Machiavelli (1532/2003) and Thomas Hobbes (1651/1986). The derived term Machiavellianism, for example, implies that people in positions of power have a general propensity to distrust others (Dahling, Whitaker, & Levy, 2009). In his classic book Exchange and Power in Social Life, Peter Blau (1964/2008) also remarked that distrust in economic relations is expected in our society. Accordingly, it is discussed whether today's business schools are training the next generation of managers to distrust others due to the way they teach the basic assumptions of economics such as rationality and self-interest (Arruñada & Vázquez, 2013). It has also been put forth that our society and its organizations could function without trust because distrust motivates people to establish systems that are based on mechanisms other than trust (Cook, Hardin, & Levi, 2005).

This keynote of distrust not only stands in marked contrast to the old ideal of the honorable merchant who is both trusting and trustworthy and who does business based on good faith (Cox, 1958; Frevert, 2013). It also contradicts well established findings from sociological, economic, and organizational research showing that trust is fundamental in various social contexts such as negotiation,

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¹ Participants (N=87; 52.9% female; M=34.98 years, SD=9.89 years, range: 18–63 years) were recruited via postings in an online career network for German professionals. The sample size was determined based on Cohen's power analysis (1992). Participants were asked to answer two dichotomous questions in randomized order. The instruction was to select the answer that best reflects how they think: "Managers are generally distrusting of others" versus "Managers are generally trusting of others" versus "Employees without managerial responsibilities are generally trusting of others." Chi-square tests revealed significant differences in respondents' answer frequencies: Managers were significantly more often considered distrusting than trusting ($\chi^2(1, N=87)=6.08, p<0.05$), and non-managers were significantly more often considered trusting than distrusting ($\chi^2(1, N=87)=14.08, p<0.05$).

organizational change, entrepreneurship, organizational alliances, leadership, and team processes (Caliendo, Fossen, & Kritikos, 2012; Fulmer & Gelfand, 2012). Further research has shown that trust reduces transaction costs and thereby stimulates economic success (Alesina & La Ferrara, 2002). Finally, no less than Adam Smith (1776/2000) emphasized the role of trust as a foundation for the functioning of our market system in general (Evensky, 2011).

At the micro level, prior organizational research has emphasized both the importance of trust in managers and trust of managers. The majority of publications deal with trust in managers or leaders (Burke, Sims, Lazzara, & Salas, 2007; Dirks & Ferrin, 2002; Grover, Hasel, Manville, & Serrano-Archimi, 2014; Mayer & Davis, 1999) and have demonstrated, for instance, that employees' trust in managers is associated with job satisfaction, organizational commitment, intention to stay, and job performance (Dirks & Ferrin, 2002; Nienaber, Romeike, Searle, & Schewe, 2015a). However, empirical research on trust of managers or leaders is relatively scarce, as has been noted previously (Brower, Lester, Korsgaard, & Dineen, 2009; Fulmer & Gelfand, 2012; Nienaber et al., 2015a). In this context, Brower et al. (2009) have shown that managers' trust is positively related to their employees' organizational citizenship behavior and negatively related to their employees' intentions to quit. Further researchers have noted that trust in others is associated with behaviors that are particularly decisive for managers, for example delegating tasks (Jehn & Mannix, 2001), handling complexity (Luhmann, 1968/2014), encouraging others to achieve their potential (McGregor, 1960/1987), forming new relationships, or giving former relationships a second chance (Rotter, 1980). Moreover, trust in others is also related to less monitoring and surveillance (McGregor, 1960/1987). Given these advantages of managerial trust for managers themselves (e.g., saving time and motivating employees by delegating tasks without constant monitoring), their employees (e.g., feeling encouraged and wanting to stay), and thus their organizations, it would be both surprising and alarming if managers would be particularly distrusting.

The present study therefore has two aims. First, it strives to extend the scarce empirical literature on managers' trust in others. Second, it strives to answer the questions of whether managers are really more distrusting than non-managers and whether individuals become more distrusting after moving up the career ladder to become managers. We investigate these questions using both self-report and behavioral data from the German Socio-Economic Panel (SOEP), a nationally representative longitudinal study. Since the SOEP has included self-reported generalized trust (also called trust propensity, see Colquitt, Scott, & LePine, 2007) as well as an experimental trust game (i.e., behavioral trust) in several waves, it allows both cross-sectional and longitudinal analyses with both kinds of data. In terms of the longitudinal perspective, we use fixed-effects models (Allison, 2009) to estimate the impact of a transition to a managerial position on individuals' trust. Overall, this article contributes to theory and practice in at least to ways. In terms of the conceptualization of trust, it helps to understand whether trust in others remains stable or is prone to change when individuals are promoted to managerial positions. In testing the cliché of the distrustful manager, it further clarifies if organizations really need to worry about their leaders' level of trust, as some media reports suggest. Please note that, following other researchers (Dirks & Ferrin, 2002), we use the terms managers and leaders interchangeably.

2. Trust and distrust

Although the term trust is ubiquitous (Frevert, 2013) and subject of abundant research, there is no universally accepted definition (Kramer, 1999). Depending on the research perspective, trust has

been conceptualized in different ways and on different levels of analysis. Trust has been defined as a trait, a state, a process, or a choice behavior in dilemma situations (for an overview, see Burke et al., 2007; Kramer, 1999), as involving cognitive, calculative, and rational, but also affective, social, and relational dimensions (Lewis & Weigert, 1985; McAllister, 1995), and it has been examined on individual, group, organizational, or system level (Fulmer & Gelfand, 2012; Khodyakov, 2007; Kroeger, 2015), for example.

We build on the framework of Fulmer and Gelfand (2012) who distinguish between trust at a level of analysis and trust in a referent. In terms of the level of analysis, this article focuses on trust at the individual level. In terms of the referent, the target of trust, this article mainly focuses on generalized trust in others, also called trust propensity or dispositional trust (Colquitt et al., 2007; Mayer, Davis, & Schoorman, 1995). Since generalized trust focuses on positive expectations of others, that is, the general "expectancy that others can be relied upon" (Rotter, 1967, p. 651), our definition of trust emphasizes this facet (also see Fulmer & Gelfand, 2012). Beyond positive expectations of others' trustworthiness, further definitions of trust sometimes focus on the willingness to accept vulnerability (Nienaber, Hofeditz, & Romeike, 2015b; Rousseau, Sitkin, Burt, & Camerer, 1998) as a consequence of positive expectations. Although (self-reported) generalized trust and behavioral trust games are often examined in different disciplines, psychology and economics, respectively (for an overview, see Lewicki, Tomlinson, & Gillespie, 2006), it can be argued that the psychological aspects of trust, for example positive expectations of others, are also reflected in behavioral trust measures. That is, these games usually involve the risk that a second, unknown participant might not act as positively as expected.

When defining trust, it is also important to note what trust is not. Luhmann (1968/2014), for example, has pointed out that trusting somebody is more than just hoping that the other party is reliable. Rotter (1980) further emphasizes that trust is not equivalent to gullibility, which can be defined as a naïve or foolish attitude, expressed in believing others despite crystal clear evidence that they should better not be believed. In Rotter's studies (1980), high trusters were not more likely to be fooled than low trusters. Aside from these undisputed distinctions, it is debated in the literature how trust is related to distrust. Earlier, classic research (e.g., Rotter, 1967, 1971, 1980) regards trust and distrust as a single bipolar construct and hence as opposite ends of a continuum. Research in this tradition usually considers low trust expectations equivalent to distrust (Tardy, 1988; Wheeless & Grotz, 1977). That is, trust comprises positive expectations of others and low trust (distrust) involves negative expectations (Deutsch, 1958; Govier, 1992). However, some researchers in this tradition (i.e., understanding trust and distrust as ends of the same continuum) suggest a neutral state in the conceptual range and consider low trust not the same as distrust (e.g., Parkhe & Miller, 2000; for a detailed overview of this discussion see Guo, Lumineau, & Lewicki, 2015). Also following the notion of (dis)trust as a bipolar construct, researchers in behavioral economics and decision research have used investment games to capture individuals' trust and distrust from a rational choice perspective (Berg, Dickhaut, & McCabe, 1995; Coleman, 1990). In a typical game, trust is reflected in cooperative behavior, while distrust is expressed in non-cooperative conduct. In contrast to the ideas above, more recent research (Lewicki, McAllister, & Bies, 1998) has proposed that trust and distrust are not the same construct but separate dimensions, making it possible for parties of a relationship to both trust and distrust one another. Lewicki et al. (1998) argue, for instance, that parties in a relationship can have positive expectations regarding certain aspects of the relationship but negative expectations regarding other aspects, resulting in a high trust and high distrust relationship. Overall, Dimoka (2010, p. 374) has denoted the discussion about the relation between trust and distrust "still an unresolved issue."

In the present article, we follow the older, classic view of trust and distrust as opposite ends of the same continuum, with low trust being equivalent to distrust, for two reasons. Since this understanding of trust and distrust is the one implicit in several articles (e.g., Govier, 1994) and also common in most dictionary definitions (for an overview of dictionary definitions, see Guo et al., 2015, p. 19), it is highly likely that the press articles and business guidebooks we were citing in the introduction also implicitly follow this notion. Second, and more importantly, we follow the traditional view based on our definition and measurement of trust. We focus on generalized trust in others, also using experimental games in the tradition of Berg et al. (1995). In our view, the twodimensional conceptualization of trust and distrust (Lewicki et al., 1998) would be more appropriate and meaningful when studying specific, complex, and multi-faceted relationships. That is, a specific relationship, for example the relationship between a manager and a specific direct report, might be characterized by several inconsistent and ambivalent views of each other, based on different encounters in different contexts-as Lewicki et al. (1998) point out in the description of multiplex relationships. Thus, in such specific, multiplex relationships, trust might be better conceptualized as two-dimensional, allowing trust and distrust to be present simultaneously. However, in the context of generalized trust in others, with no distinctive relationship history but more distant experiences of general past interactions, a one-dimensional view can be considered more compatible. Moreover, Lewicki et al. (2006, p. 1004) point out that the measurement issues regarding the twodimensional conceptualization of trust and distrust "are complex and yet to be tackled." Hence, common trust measures, for example used in large panels such as the SOEP, typically reflect a onedimensional view of trust and distrust.

In sum, we conceptualize trust in this article as unidimensional, with distrust being equivalent to low trust. For the sake of simplicity, we refer to both self-reported generalized trust and behavioral trust when generally speaking of trust or trusting managers.

3. The present research

In the present research, we sought to examine whether managers are really more distrusting than non-managers and whether individuals become more distrusting when they achieve a managerial position. On the one hand, the cliché of the distrustful manager seems plausible. Both managerial aspirants and managers compete for scarce resources and positions. Hence, they might feel the need to secure themselves against competitors' attacks (Grove, 1996) and might overgeneralize this "you cannot be too careful"attitude to people in general. It is also possible that selection effects occur and accumulate over time: Maybe only particular personalities study at business schools, and these schools may train future managers to distrust others (Arruñada & Vázquez, 2013); and finally, it is possible that only particularly distrusting employees, regardless of their educational background, aim to attain managerial positions in the first place. In line with these ideas, prior personality research has demonstrated that personality does not only influence our work choices, but also vice versa. That is, work experiences are also associated with changes in personality traits such as agency, emotional stability, or conscientiousness (Roberts, 1997; Roberts, Caspi, & Moffitt, 2003; Roberts, Walton, Bogg, & Caspi, 2006). Hence, it is also conceivable that generalized (dis) trust might affect individuals' job choices (e.g., aiming for managerial positions) and that work experience (e.g., being promoted to a managerial position) leads to decreases in generalized trust. Further supporting the notion of the distrustful manager, recent experimental studies have linked power and distrust (Mooijman, van Dijk, Ellemers, & Van Dijk, 2015; Schilke, Reimann, & Cook, 2015), however, using samples without actual managers (e.g., university students or Amazon Mechanical Turk users). Based on the ideas above, the cliché hypothesis is:

Hypothesis 1. Managers are more distrusting of others than non-managers (H1a), and employees who become managers become more distrusting of others (H1b).

On the other hand, however, the cliché of the distrustful manager seems implausible. Given the fundamental importance of trust for social and organizational functioning (Fukuyama, 1995; McAllister, 1995), it would be both astonishing and startling if positions with managerial responsibilities would be dominated by generally distrusting individuals. The abovementioned media coverage is not always clearly substantiated and could also be due to the media's focus on exceptional (top) managers. Hence, these reports might not reflect the characteristics of the vast majority of managers. There is also first evidence, showing that managers are, on average, more trusting than entrepreneurs (Caliendo et al., 2012). Moreover, it was recently demonstrated that the belongingness to a higher social class is associated with more trustful and prosocial behaviors (Korndörfer, Egloff, & Schmukle, 2015). Finally, it is likewise possible that only particularly confident and trusting individuals, who feel comfortable delegating tasks (Jehn & Mannix, 2001) and asking others for personal advice, might achieve leadership positions in the first place. Following the research on work experiences and resulting personality changes (Roberts, 1997; Roberts et al., 2003, 2006), it is likewise possible that the success of achieving a managerial position is associated with an increase in generalized trust. Moreover, Kramer (1999) has noted that concerns about others' trustworthiness may be more frequent not at managerial but at lower hierarchical levels, due to their greater vulnerability. In line with this thought, Wu and Wilkes (2016) have argued that a privileged, powerful position reduces the costs of risk-taking and hence facilitates trust in those with power. Therefore, our competing hypothesis is:

Hypothesis 2. Managers are more trusting of others than non-managers (H2a), and employees who become managers become more trusting of others (H2b).

4. Method

4.1. Sample

Our sample is part of the SOEP, an ongoing, nationally representative longitudinal study of private households in Germany (for a comprehensive overview of the research design, see Wagner, Frick, & Schupp, 2007). The data are collected by a professional fieldwork organization (TNS Infratest, Munich). The first wave of this study was conducted in 1984. In this article, we use self-report data from the years 2003, 2008, and 2013 because generalized trust in others was assessed in these three waves. Following researchers who combined the analyses of self-reported trust with the analysis of behavioral trust (Evans & Revelle, 2008), we also use behavioral data from an experimental trust game, conducted within the SOEP in 2003, 2004, and 2005. Data were collected by computer-assisted face-to-face interviews.

4.1.1. Self-report data

A pooled sample of 61,146 respondents (2003: N = 22,564, 2008: N = 19,648, 2013: N = 18,934) provided trust data. The mean age of the respondents (52.5% female) when taking the

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questionnaire was 49.44 years (SD = 17.74 years, range: 17–103 years).

Because we are interested in comparing managers and non-managerial employees, we examined the subsample of respondents in the active workforce (54.3% of all respondents). Therefore, the final sample comprised 32,926 working adults (M=43.96 years, SD=11.52 years, 48.2% female). Of these, 23.5% were single, 64.6% were married, 10.4% were separated or divorced, and 1.5% were widowed. As to educational background, 23.4% of the respondents had graduated from the vocational track of the three-tier German secondary system, 34.7% had graduated from the intermediate track, and 32.1% had graduated from the academic track. The remaining 9.8% were still in school, had left school without graduating, or held some other type of qualification.

4.1.2. Behavioral data

A pooled sample of 1902 respondents (2003: N = 658, 2004: N = 650, 2005: N = 594) participated in an experimental trust game. The mean age of the respondents (51.0% female) when taking the questionnaire was 50.70 years (SD = 17.06 years; range: 18–91 years).

Again, we examined the subsample that belonged to the active workforce (49.0% of the respondents). The final sample comprised 924 working adults (M=44.31 years, SD=10.58 years, 46.7% female). Of these respondents, 21.3% were single, 69.4% were married, 7.3% were separated or divorced, and 2.0% were widowed. As to educational background, 31.4% of the respondents had graduated from the vocational track of the three-tier German secondary system, 34.6% had graduated from the intermediate track, and 24.3% had graduated from the academic track. The remaining 9.7% were still at school, left school without graduating, or held some other type of qualification.

Since self-reported trust was assessed in 2003, 2008, and 2013 and the trust game was conducted in 2003, 2004, and 2005, our samples were overlapping in 2003. Overall, referring to the active workforce in 2003, 325 respondents participated in both the self-report and the experimental assessment (n=11,946 respondents only provided self-report data, and n=1 only participated in the trust game).

4.2. Measures

4.2.1. Self-reported trust

Corresponding with different definitions, facets, and levels of trust, several measurements of trust have been developed in the trust literature. We used a three-item survey measure of generalized trust that builds on items from the General Social Survey and the World Value Survey and that has been shown to be both reliable and valid (Dohmen, Falk, Huffman, & Sunde, 2008; Naef & Schupp, 2009). These three items, which are used in the SOEP, are "On the whole, one can trust people," "Nowadays one can't depend on anyone," and "When dealing with strangers, it is better to be cautious before trusting them." These items are similar to other measurements of generalized trust (e.g., Mayer & Davis, 1999; Rotter, 1967). Items were answered on a scale from 1 (totally agree) to 4 (totally disagree). Item 1 was recoded for further analyses so that a higher value represents a higher level of trust. For the active workforce each year, the internal consistency was adequate (Cronbach's $\alpha = 0.63$ in 2003, Cronbach's $\alpha = 0.63$ in 2008, and Cronbach's $\alpha = 0.64$ in 2013), given that the scale consisted of only three items (Cortina, 1993; Schmitt, 1996). Factor analyses further indicated unidimensionality (range of explained variance between 57.82% in 2003 and 59.16% in 2013).

The temporal stability of the trust scale, referring to the active workforce, was $r_{2003_2008} = 0.47$, $r_{2008_2013} = 0.51$, and

 $r_{2003_2013} = 0.46$, respectively. Compared with personality traits like neuroticism, extraversion, and openness, for example, which display six-year stabilities between 0.63 and 0.83 (Costa & McCrae, 1988), the stability of our trust scale was somewhat lower. In brief, generalized trust was relatively stable but still subject to some fluctuation.

4.2.2. Behavioral trust data

In the experimental game (Berg et al., 1995; Fehr, Fischbacher, von Rosenbladt, Schupp, & Wagner, 2002; Johnson & Mislin, 2011), respondents were randomly chosen from the SOEP population and assigned to one of two groups. The game was conducted in 2003, 2004, and 2005. The group membership (group 1 or group 2) remained constant. First, respondents in group 1 received €10 as starting capital and decided on how much to transfer to a randomly assigned respondent in group 2. Respondents were free to transfer any whole-number amount between €0 and €10. After the respondents in group 1 decided on how much money to transfer, the transferred sum was doubled. Respondents in group 2, who also received €10 as starting capital, then decided on the amount of money that should be transferred back. This sum was doubled as well. The amount of money transferred by respondents in group 1 is considered a measure of trust, and the amount of money transferred by respondents in group 2 can be regarded as a measure of fairness (Fehr et al., 2002). For example, if respondent 1 gives €10 to respondent 2, respondent 2 receives the doubled sum of €20; if respondent 2 is unfair and keeps the starting capital of €10, respondent 2 will receive the maximum amount of €30, and respondent 1 receives €0. Because we were interested in the trust measure, only data of respondents in group 1 (i.e., the sum they initially transferred to the respondents in group 2, ranging from \in 0 to \in 10) were included in our analyses.

The temporal stability of the experimental trust measure, referring to the active workforce, was $r_{2003_2004} = 0.48$, $r_{2004_2005} = 0.62$, and $r_{2003_2005} = 0.39$. That is, the behavioral trust data were also relatively stable over time.

Analyzing the small subsample that provided both self-report and behavioral trust data in 2003 (n=325), we found a small but significant correlation between self-reported and behavioral trust ($r=0.14,\ p<.001$). This small but significant correlation corresponds to earlier multi-method analyses of trust (Naef & Schupp, 2009) and can be considered typical of situations in which a general disposition is correlated with a specific action (Ajzen, 1987). Further authors have also argued that self-reported trust and behavioral trust capture different facets of trust (Ben-Ner & Halldorsson, 2010).

4.2.3. Leadership status

Respondents provided answers to the SOEP question "What is your current occupational status?" If employed in more than one position, respondents were asked to report on their main position only. The main answer categories and subcategories are presented in Table 1. Similar to Caliendo et al. (2012), we further created a variable that indicates whether a respondent does or does not have managerial responsibilities.² If respondents classified themselves either as "white collar workers with highly qualified duties or managerial functions", as "white collar workers with extensive managerial duties", as "civil servants on executive level", or as "self-

² Please note that Caliendo et al. (2012) focused on self-employment and classified self-employed respondents as entrepreneurs, whereas we classified self-employed respondents with own employees as "with managerial responsibilities" and self-employed respondents without own employees as "without managerial responsibilities."

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 Table 1

 Leadership status (self-report data: behavioral data)

Leadership status	Managerial responsibilities		
	With (<i>n</i> = 7763; <i>n</i> = 167)	Without ($n = 25,163$; $n = 757$)	
Blue-collar	-	Untrained worker ($n = 1387$; $n = 42$)	
worker		Trained worker ($n = 2973$; $n = 112$)	
		Trained and employed as skilled worker ($n = 3669$; $n = 121$)	
		Foreman ($n = 555$; $n = 14$)	
		Master craftsman ($n = 230$; $n = 5$)	
White-collar worker	Employee with highly qualified duties or managerial function ($n = 4706$; $n = 102$)	Industry and works foreman in a salaried position ($n = 203$; $n = 1$)	
	Employee with extensive managerial duties ($n = 634$; $n = 15$)	Employee with simple duties, without training/education certificate $(n = 1626; n = 52)$	
		Employee with simple duties, with training/education certificate ($n = 2746$; $n = 96$)	
		Employee with qualified duties ($n = 7896$; $n = 202$)	
Civil servant	Executive level ($n = 741$; $n = 15$)	Lower level $(n = 62; n = 0)$	
		Middle level ($n = 590$; $n = 23$)	
		Upper level ($n = 1194$; $n = 30$)	
Self-employed	1 3 \ , , ,	Self-employed farmer $(n = 69; n = 6)$	
		Freelance professional/independent scholar ($n = 671$; $n = 16$)	
		Other self-employed ($n = 1158$; $n = 31$)	
		Family member working for self-employed relative ($n = 134$; $n = 6$)	

employed with own employees", we classified them as "with managerial responsibilities." All other working respondents were classified as "without managerial responsibilities" (see Table 1 for an overview). In terms of the self-report data from 2003, 2008, and 2013, this classification resulted in 7763 (23.6%) respondents with managerial responsibilities and 25,163 (76.4%) respondents without managerial responsibilities. In terms of the behavioral data from 2003, 2004, and 2005, this classification yielded 167 (18.1%) respondents with managerial responsibilities and 757 (81.9%) respondents without managerial responsibilities.

4.3. Analyses

We conducted both cross-sectional and longitudinal analyses. In terms of the cross-sectional perspective, we conducted ANOVAs with leadership status (with or without managerial responsibilities) as independent variable and self-reported trust as well as behavioral trust as dependent variables.

In terms of the longitudinal perspective, we used fixed-effects models (Allison, 2009) to estimate the impact of a transition to a position with managerial responsibilities on the self-reported and the behavioral trust of the respondents. We opted for this separation of cross-sectional analyses and longitudinal fixed-effects models to unravel between and within variation in our data, which would have been intermixed when using random-effects models (Brüderl, 2010).

As fixed-effects models only use within-individual variation, the results cannot be confounded by time-constant unobserved heterogeneity (such as social origin, childhood experiences, stable personality traits etc.). Therefore, the fixed-effects approach is recommendable for situations in which one aims to control for stable unobserved differences between individuals, whether or not these differences are associated with measured variables (Allison, 1994). In our case, cross-sectional analyses alone could be biased because individuals who transition to a position with managerial responsibilities may differ in many unknown time-constant aspects from individuals who remain in a position without managerial responsibilities. Even a selection effect regarding our variable of interest may take place. People high or low in trust may have different chances of obtaining a position with managerial responsibilities, resulting in biased results when using a conventional framework of analysis.

A restriction of fixed-effects models is that they can only be calculated for individuals who somehow changed on the outcomes—in our case trust—over time (Allison, 2009). As we are interested in identifying the time-related effect of a transition into a position with managerial responsibilities, we excluded persons with no change in leadership status (i.e., always had managerial responsibilities or never had managerial responsibilities) as well as persons who previously had managerial responsibilities but lost them during the course of our study. That is, we focused on the subsamples that entered a position with managerial responsibilities between two study intervals (i.e., in terms of the selfreport data: from 2003 to 2008 or from 2008 to 2013; in terms of the behavioral data: from 2003 to 2004 or from 2004 to 2005). For the self-report data, this modeling approach provided a subsample of 776 individuals (M = 39.76 years, SD = 10.70 years, 43.9% female) with 1552 observations (i.e., two per person). For the behavioral data, the same approach led to a subsample of 20 individuals (M = 48.00 years, SD = 10.61 years, 55.0% female) with 40 observations. Analyses were computed with Stata 13.

In sum, we used the full samples (self-report: N=32,926 working adults; behavioral data: N=924 working adults) in our pooled cross-sectional, between-subjects analyses and the subsamples of 776 (self-report) and 20 (behavioral data) individuals who achieved a leadership position in the course of our study in our longitudinal, fixed-effects models. By using fixed-effects and thus a reduced sample, we follow the argument that the reduction of between variation is the very advantage of panel data compared to cross-sectional data. That is, reducing between variation represents a protection against inconsistent and biased parameter estimates (Halaby, 2004).

5. Results

5.1. Self-report data

5.1.1. Cross-sectional analyses

As displayed in Fig. 1, respondents with managerial responsibilities reported significantly higher trust scores than respondents without managerial responsibilities (M = 2.53, SD = 0.54 vs. M = 2.32, SD = 0.53; d = 0.39, F(1, 32,924) = 952.22, p < .001; see also Table 2). The effect size (d = 0.39) is in between what Cohen (1992) has defined as small (0.20) and medium (0.50). Thus,

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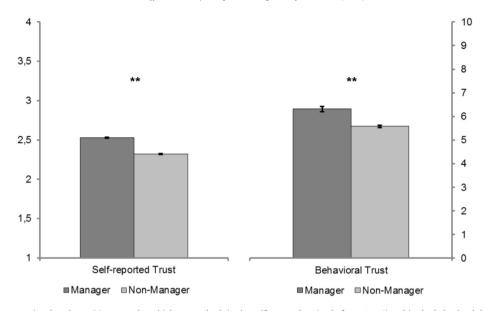


Fig. 1. Results of pooled cross-sectional analyses: Managers show higher trust both in the self-report data (scale from 1 to 4) and in the behavioral data (range from €0 to €10). Error bars represent standard errors of the mean; **p < .001.

 Table 2

 Results of cross-sectional and longitudinal analyses.

Perspective and analytical approach	Data	Results	
Cross-sectional, between-subjects: ANOVA	Self-report	Trust (managers): Trust (non-managers):	M = 2.53, $SD = 0.54M = 2.32$, $SD = 0.53$
	Behavioral data	F(1, 32,924) = 952.22, p < .001, d = 0.39 Trust (managers): Trust (non-managers):	M = 6.31, $SD = 2.68M = 5.58$, $SD = 2.61$
Longitudinal, within-subjects: Fixed-effects	Self-report Behavioral data	F(1, 922) = 10.53, p < .001, d = 0.28 B = 0.018, F(1, 775) = 0.80, p > 0.250 B = -0.100, F(1, 19) = 0.05, p > 0.250	,

Note. Higher trust scores in the self-report data indicate higher trust levels (scale from 1 to 4). Higher trust scores in the behavioral data indicate a larger sum of money (range from \in 0 to \in 10) that has been transferred by the respondent to a second anonymous player in the trust game.

results support Hypothesis 2a and not Hypothesis 1a.

In addition, respondents with managerial responsibilities were, in comparison to respondents without managerial responsibilities, older (M=46.24 vs. M=43.26 years, p<.001), less likely to be female (31.4% vs. 53.4%, p<.001), much better educated (8.8% vs. 27.9% of the participants had graduated from the vocational track of the three-tier German secondary system, 21.3% vs. 38.8% had graduated from the intermediate track, 65.2% vs. 21.9% had graduated from the academic track, and 4.7% vs. 11.4% had left school without graduating or held some other type of qualification, p<.001), less likely to be single (18.7% vs. 25.0%, p<.001), or separated (8.7% vs. 10.9%, p<.001), and more likely to be married (71.3% vs. 62.5%, p<.001). Further analyses revealed no sex differences in trust ($M_{\rm women}=2.37$ vs. $M_{\rm men}=2.36$, p=.250) and a significantly positive correlation between trust and years of education (r=0.25, p<.001).

Analyses treating the subsamples from 2003, 2008, and 2013 separately (not pooled) showed consistent and almost identical results. As the data have a nested structure, with respondents being nested in households, analyses with robust standard errors, which adjust for the multilevel structure of the data (Muthén & Satorra, 1995), were estimated and showed consistent results.

5.1.2. Longitudinal analyses

As displayed in Table 2, the fixed-effects model revealed no impact of a transition to a position with managerial responsibilities

on self-reported trust (B=0.018, F(1,775)=0.80, p>.250). Analyses with robust standard errors showed consistent results. Calculating separate models for men (n=435) and women (n=341) also did not produce significant effects (men: B=0.013, F(1,434)=0.22, p>.250; women: B=0.024, F(1,340)=0.70, p>.250). That is, results neither support Hypothesis 1b nor Hypothesis 2b: The transition to a position with managerial responsibilities did not lead to systematic changes in self-reported trust

5.2. Behavioral data

5.2.1. Cross-sectional analyses

As displayed in Fig. 1, respondents with managerial responsibilities transferred significantly more money to the other player in the experimental trust game than respondents without managerial responsibilities ($M = \&cite{c}6.31$, $SD = \&cite{c}2.68$ vs. $M = \&cite{c}5.58$, $SD = \&cite{c}2.61$; d = 0.28, F(1, 922) = 10.53, p < .001; see also Table 2). The effect size (d = 0.28) is in between what Cohen (1992) has defined as small (0.20) and medium (0.50). So, again, results support Hypothesis 2a and not Hypothesis 1a.

Again, respondents with managerial responsibilities were, in comparison to respondents without managerial responsibilities, slightly older (M=45.59 vs. M=44.03 years, p=.085), less likely to be female (26.9% vs. 51.0%, p<.001), much better educated (10.8% vs. 36.0% of the participants had graduated from the vocational

track of the three-tier German secondary system, 26.9% vs. 36.3% had graduated from the intermediate track, 58.7% vs. 16.7% had graduated from the academic track, and 3.6% vs. 11.0% had left school without graduating or held some other type of qualification, p < .001), less likely to separated (3.6% vs. 8.1%, p < .05), and more likely to be married (76.7% vs. 67.1%, p < .05). There were no sex differences in the amount of money transferred ($M_{\rm women} = 5.77 \in$ vs. $M_{\rm men} = 5.66 \in$, p > .250), and there was a small but significantly positive correlation between the amount of money transferred and years of education (r = 0.15, p < .001). Analyses treating the subsamples from 2003, 2004, and 2005 separately (not pooled) and analyses with robust standard errors, adjusting for the multilevel structure of the data, showed consistent results.

5.2.2. Longitudinal analyses

The fixed-effects model revealed no impact of a transition to a managerial position on the amount of money transferred in the trust game (B = -0.100, F(1,19) = 0.05, p > .250). Analyses with robust standard errors showed consistent results. So, again, results neither support Hypothesis 1b nor Hypothesis 2b: The transition to a managerial position did not lead to systematic behavior changes in the trust game

6. Discussion

The aims of our study were to examine trust from the perspective of managers and to put the cliché of the distrustful manager to the test. Our analyses built on a wide-ranging sample over a multi-year period, allowing us to disentangle selection effects and developments over time. Our results refute the cliché. Individuals in managerial positions do not exhibit a lower level of trust before, or a systematic reduction in trust after attaining such positions. Moreover, our analyses reveal that managers are generally more trusting than non-managers. Our study thus indicates a selection effect: It seems that particularly trusting people seek and achieve leadership positions more often than less trusting people. On a more general level, these findings provide a more positive view of individuals who seek and accept managerial functions. Hence, trust seems to be not only "a determinant of entry into selfemployment" (Caliendo et al., 2012, p. 405), but also a determinant of entry into a position with managerial functions in general.

Our findings do not imply, however, that managers are overly trusting or even gullible. When examining the managerial trust scores in our study (M = 2.53 on a scale from 1 to 4; M = 6.31 out of €10), it becomes evident that the managers in our sample attained, on average, a medium score. Managers seem to have a medium level of trust, whereas non-managers seem to be somewhat more skeptical of others—which corresponds to the idea that doubts in others' trustworthiness may be more frequent at less powerful and thus more vulnerable levels (Kramer, 1999; Wu & Wilkes, 2016). Returning to the notion that university business programs could foster distrust through the way that they teach the standard assumptions of economics (Arruñada & Vázquez, 2013), our findings appear to dispel this concern. Although we do not know the exact study paths of our manager sample, it seems unlikely that certain types of school or education could have had negative effects. On the contrary, education in general appears to foster trust in others (i.e., years of education and trust are correlated).

Apart from our data showing a link between education, trust, and a managerial career, data from the US Social Survey show that intelligence is also related to a higher level of generalized trust, possibly because more intelligent people may be better at evaluating different individuals and situations (Carl & Billari, 2014). Since meta-analytical data (Judge, Colbert, & Ilies, 2004) show a

moderate relationship between intelligence and leadership, intelligence may be a further factor that contributes to the higher trust level of managers.

A current study on trust (Dunning, Anderson, Schlösser, Ehlebracht, & Fetchenhauer, 2014) suggests a further explanation in showing that trust in unknown others follows the logic of a norm. That is, people who express and display trust in strangers do so in part because they feel they have to, because they feel they are obliged to by their social role. Similarly, it has been shown that at least a small amount of variance in trust is accounted for by the need for social approval (Rotter, 1967, 1971). Transferring these findings to the context at hand, it is possible that managers—who are more likely to find themselves in the public eye than nonmanagers—may think that their social role entails a duty to show trust in others. From this perspective, managers would fulfil a social duty by expressing generalized trust, regardless of what they really think in private. The idea that some managers who publicly profess generalized trust privately have a more negative, less trusting attitude toward others was argued by McGregor (1960/1987) as early as the 1960s. However, since our fixed-effects models show no systematic changes in trust when jobholders transition from a position without managerial responsibilities to a position with such responsibilities, there is no reason to believe that the social desirability component should play a greater role for managers than for non-managers. Still, it remains possible that future managers feel already obliged to express trust in earlier, non-managerial stages of their career.

Our findings have both theoretical and practical implications. At first, we contribute a longitudinal analysis of managerial trust to the literature that has so far been dominated by cross-sectional research and a focus on the subordinate perspective (Nienaber et al., 2015a). Further, returning to the conceptualization of trust, our study shows that a transition to a managerial position is not a far-reaching enough change to systematically alter one's trust in others, at least not in the short term. Although both our trust measures were generally somewhat less stable over time as compared to the Big Five personality traits (Costa & McCrae, 1988), for instance, they did not change systematically due to the achievement of a management position. Referring to the studies of Roberts and colleagues (e.g., Roberts et al., 2003, 2006) who have demonstrated that work experiences can lead to personality changes, our analysis adds the observation that promotions to managerial positions are work experiences that do not alter employees' generalized trust, at least not in the near future. Thereby, our analysis also contributes to the literature on work experience and personality development.

In terms of practical implications, our findings underline that the clichéd fear of managerial distrust or trust loss is unfounded. What might be true for single cases seems not to be true for managers in general. It is also important to note that our findings add new perspectives on the previously mentioned experimental work (e.g., Schilke et al., 2015) that manipulated participants' relative power position and found that participants with *low* power trusted more in social exchanges. Thus, it seems that findings are dependent on the kind of trust measured (trust in social exchanges versus generalized trust) as well as on the kind of power involved (experimentally manipulated, situational power versus actual, durable power of managers; Wu & Wilkes, 2016).

Overall, our findings concur with researchers who have emphasized the positive, beneficial consequences of trusting others. The selection effect evident in our study shows that people who trust others are more successful in achieving a managerial position than their less trusting counterparts—possibly because trust involves a better handling of complexity (Luhmann, 1968/2014), the encouragement of others to achieve their potential

(McGregor, 1960/1987), and the reduction of transaction costs (Blau, 1964/2008; Alesina & La Ferrara, 2002). This also implies that the competition for scarce managerial positions, often described using such strong terms as a "dog-eat-dog fight" or a "snake pit," does not seem to lead to a generally negative managerial view of others. On the contrary, our findings support a more favorable view of people who take on managerial functions. This positive aspect is particularly noteworthy since research frequently characterizes managers or other people in positions of power as lacking in prosocial behavior—for instance, as more narcissistic (Brunell et al., 2008), more antisocial in adolescence (Obschonka, Andersson, Silbereisen, & Sverke, 2013), and as bordering on certain personality disorders (Board & Fritzon, 2005).

Overall, our results show that trust contributes to a successful career, even though some business guidebooks (Bhote, 2002; Grove, 1996; Gulati, 2014) and press articles (Beer, 2004; Douglas, 2012) seem to suggest otherwise. Their focus on managerial distrust may be partly accounted for by publishers' treatment of negative aspects as more newsworthy due to the general human tendency—and thus an inclination they ascribe to their readers—to focus on negative, bad news rather than positive, good news (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Since the media filters information for us (Van Lange, 2015) and may portray exceptional top managers who are particularly distrusting or became so in the course of their career (Meck, 2014), this study helps to develop a more realistic view of the average manager.

On a broader level, trust is not only important within and between organizations (Fulmer & Gelfand, 2012) but is also essential for the functioning of our welfare system, financial markets, and market system as a whole (Smith, 1776/2000; Carl & Billari, 2014). From this perspective, our findings can be considered reassuring as well. A reported generalized trust in others among managers should create favorable conditions for overcoming market crises (note that our data cover the period around the financial crisis of 2008).

In terms of future research, we first suggest to tackle the limitations of the present study. Since the internal consistency of our self-report measure was between 0.60 and 0.70 (for common cutoffs, see Lance, Butts, & Michels, 2006), we suggest further individual studies with extended trust measures and the inclusion of detailed social desirability instruments (Steenkamp, De Jong, & Baumgartner, 2010). Although Alphas between 0.60 and 0.70-and sometimes even single items (e.g., Oishi, Kesebir, & Diener, 2011)are accepted and common when broad traits are assessed by short scales in the context of panel data (e.g., Pollner, 1989; Specht, Egloff, & Schmukle, 2011), it would be useful to corroborate our findings with an extended scale. More specifically, it would be also interesting to examine specific manager-employee relationships using a two-dimensional conceptualization of trust and distrust (Lewicki et al., 1998, 2006). Using the SOEP data, it would be further worthwhile to follow the trust scores of the respondents in the future to corroborate our findings. Future research could also concentrate on possible differences between managerial trust in general versus close others as well as their relation to personality traits like need for closure (Acar-Burkay, Fennis, & Warlop, 2014). In addition to trust in other people, it would be worth knowing if managers also report more trust in technology and automation (Lee & See, 2004) than non-managers. Since our research has largely neglected contextual factors so far, similar research questions could be raised in different (organizational) cultures and political climates. Our research concept could also be applied to contexts such as school and university, for example, examining whether students who run for and are elected class representative or president of student council show more trust in others than their fellow students. In this regard, it would be intriguing to find out at what age these trust differences emerge—in particular because major theories in developmental psychology (Bowlby, 1969; Erikson, 1963) spring from the assumption that the development of trust early in life is decisive for the functioning of relationships in adulthood.

From a methodological perspective, future research on managerial trust could also go beyond the analysis of panel data, as implied already in some of the ideas above. In-depth interviews with single managers and non-managers might help to shed further light on the reasons why managers turn out to be more trusting than non-managers. Moreover, field experiments, using promotions to managerial positions as a natural quasi-experiment in a given organization, would possibly allow more detailed questions on managers' reasoning and on different levels and referents of trust (Fulmer & Gelfand, 2012). The inclusion of observer ratings in addition to self-report measures might also lead to further insights. That is, direct reports' ratings of their managers' behavior (e.g., do they delegate tasks without constant monitoring? Do they give others a second chance? Do they involve others in decision-making?) could be compared with managerial self-reports.

7. Conclusion

Is distrust of others a typical personality variable of managers? Do jobholders become more distrusting when they achieve a management position? Our analyses, using a wide-ranging longitudinal sample with both self-report and behavioral data, show that the transition to a position with managerial responsibilities does not lead to systematic changes in trust. Moreover, managers show more trust in others than non-managers. That is, jobholders seem to differ in their level of trust *before* achieving a higher position. Our analyses refute the cliché of the distrustful manager and indicate a selection effect in that particularly trusting employees are achieving leadership positions.

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References

Acar-Burkay, S., Fennis, B. M., & Warlop, L. (2014). Trusting others: The polarization effect of need for closure. *Journal of Personality and Social Psychology*, 107, 719–735. doi: 10.10 37/a0037022.

Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 1–63). San Diego, CA: Academic Press.

Alesina, A., & La Ferrara, E. (2002). Who trusts others? *Journal of Public Economics*, 85, 207–234. http://dx.doi.org/10.1016/s0047-2727(01)00084-6.

Allison, P. D. (1994). Using panel data to estimate the effects of events. *Sociological Methods & Research*, 23, 174–199. http://dx.doi.org/10.1177/0049124194023002002.

Allison, P. D. (2009). Fixed effects regression models. Quantitative applications in the social sciences. Thousand Oaks. CA: Sage.

Arruñada, B., & Vázquez, X. H. (2013). The impact of behavioural assumptions on management ability: A test based on the earnings of MBA graduates. *Management and Organization Review*, 9, 209–232. http://dx.doi.org/10.1111/ more.12016.

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. Review of General Psychology, 5, 323–370. http://dx.doi.org/10.1037// 1089-2680.5.4.323.

Beer, S. (2004, September 14). Teleworkers not trusted. *The Sydney Morning Herald*. Retrieved from http://www.smh.com.au/articles/2004/09/13/1094927496755. html?from=storyrhs.

Ben-Ner, A., & Halldorsson, F. (2010). Trusting and trustworthiness: What are they, how to measure them, and what affects them. *Journal of Economic Psychology*, 31, 64–79. http://dx.doi.org/10.1016/j.joep.2009.10.001.

Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history.

- Games and Economic Behavior, 10, 122–142. http://dx.doi.org/10.1006/game.1995.1027.
- Bhote, K. R. (2002). The ultimate six sigma: Beyond quality excellence to total business excellence. New York, NY: Amacom.
- Blau, P. M. (1964/2008). Exchange and power in social life. New Brunswick, NJ: Transaction Publishers.
- Board, B. J., & Fritzon, K. (2005). Disordered personalities at work. *Psychology, Crime & Law*, 11, 17–32. http://dx.doi.org/10.1080/10683160310001634304.
- Bowlby, J. (1969). Attachment: Attachment and loss (Vol. 1). New York, NY: Basic Books.
- Brower, H. H., Lester, S. W., Korsgaard, M. A., & Dineen, B. R. (2009). A closer look at trust between managers and subordinates: Understanding the effects of both trusting and being trusted on subordinate outcomes. *Journal of Management*, 35, 327–347. http://dx.doi.org/10.1177/0149206307312511.
- Brüderl, J. (2010). Kausalanalyse mit Paneldaten [Causal analysis with panel data]. In C. Wolf, & H. Best (Eds.), *Handbuch der sozialwissenschaftlichen Datenanalyse* (pp. 963–994). Wiesbaden: VS Verlag für Sozialwissenschaften. Brunell, A. B., Gentry, W. A., Campbell, W. K., Hoffman, B. J., Kuhnert, K. W., &
- Brunell, A. B., Gentry, W. A., Campbell, W. K., Hoffman, B. J., Kuhnert, K. W., & DeMarree, K. G. (2008). Leader emergence: The case of the narcissistic leader. Personality and Social Psychology Bulletin, 34, 1663–1676. http://dx.doi.org/10.1177/0146167208324101.
- Burke, C. S., Sims, D. E., Lazzara, E. H., & Salas, E. (2007). Trust in leadership: A multi-level review and integration. *The Leadership Quarterly*, 18, 606–632. http://dx.doi.org/10.1016/j.leaqua. 2007.09.006.
- Caliendo, M., Fossen, F., & Kritikos, A. (2012). Trust, positive reciprocity, and negative reciprocity: Do these traits impact entrepreneurial dynamics? *Journal of Economic Psychology*, 33, 394–409. http://dx.doi.org/10.1016/j.joep.2011.01.005.
- Carl, N., & Billari, F. C. (2014). Generalized trust and intelligence in the United States. PLoS ONE, 9, e91786. http://dx.doi.org/10.1371/journal.pone.0091786.
- Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 155–159. http://dx.doi.org/10.1037/0033 2909.112.1.155.
- Coleman, J. S. (1990). Foundations of social theory. Cambridge, MA: Harvard University Press.
- Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92, 909–927. http:// dx.doi.org/10.1037/0021-9010.92.4.909.
- Cook, K. S., Hardin, R., & Levi, M. (2005). Cooperation without trust? New York, NY: Russell Sage Foundation.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98–104. http://dx.doi.org/10.1037/0021-9010.78.1.98.
- Costa, P. T., Jr., & McCrae, R. R. (1988). Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO personality inventory. *Journal of Personality and Social Psychology*, 54, 853–863. http://dx.doi.org/10.1037/0022-3514.54.5.853.
- Cox, A. (1958). The duty to bargain in good faith. Harvard Law Review, 71, 1401–1442. http://dx.doi.org/10.2307/1337921.
- Dahling, J. J., Whitaker, B. G., & Levy, P. E. (2009). The development and validation of a new Machiavellianism scale. *Journal of Management*, 35, 219–257. http:// dx.doi.org/10.1177/01492063 08318618.
- Deutsch, M. (1958). Trust and suspicion. Journal of Conflict Resolution, 2, 265–279. doi: 10.117 7/002200275800200401.
- Dimoka, A. (2010). What does the brain tell us about trust and distrust? Evidence from a functional neuroimaging study. *MIS Quarterly*, 34, 373–396.
- Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87, 611–628. http://dx.doi.org/10.1037//00 21-9010.87.4.611.
- Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2008). Representative trust and reciprocity: Prevalence and determinants. *Economic Inquiry*, 46, 84–90. http://dx.doi.org/10.1111/j.1465-7295.2007.00082.x.
- Douglas, J. V. (2012, April 18). It's lonely at the top. Business Review Weekly. Retrieved from http://www.brw.com.au/p/sections/features/it_lonely_at_the_top_r6pGqMHiG6tPGiGN4.2ucDP.
- Dunning, D., Anderson, J. E., Schlösser, T., Ehlebracht, D., & Fetchenhauer, D. (2014). Trust at zero acquaintance: More a matter of respect than expectation of reward. Journal of Personality and Social Psychology, 107, 122–141. http:// dx.doi.org/10.1037/a0036673.
- Erikson, E. H. (1963). Childhood and society. New York, NY: Norton.
- Evans, A. M., & Revelle, W. (2008). Survey and behavioral measurements of interpersonal trust. *Journal of Research in Personality*, 42, 1585–1593. http://dx.doi.org/10.1016/j.jrp.2008.07.011.
- Evensky, J. (2011). Adam Smith's essentials: On trust, faith, and free markets. Journal of the History of Economic Thought, 33, 249–267. http://dx.doi.org/10.1017/ S1053837211000034.
- Fehr, E., Fischbacher, U., von Rosenbladt, B., Schupp, J., & Wagner, G. G. (2002). A nationwide laboratory examining trust and trustworthiness by integrating behavioural experiments into representative surveys. *Schmollers Jahrbuch*, 122, 519–542.
- Frevert, U. (2013). Vertrauensfragen: Eine Obsession der Moderne [Votes of confidence: An obsession of the modern world]. Munich: C. H. Beck.
- Fukuyama, F. (1995). Trust: The social virtues and the creation of prosperity. New York: Free Press.
- Fulmer, C. A., & Gelfand, M. J. (2012). At what level (and in whom) we trust: Trust across multiple organizational levels. *Journal of Management*, 38, 1167–1230.

- http://dx.doi.org/10.1177/0149206312439327.
- Govier, T. (1992). Distrust as a practical problem. *Journal of Social Philosophy*, 23, 52–63. http://dx.doi.org/10.1111/j.1467-9833.1992.tb00484.x.
- Govier, T. (1994). Is it a jungle out there? Trust, distrust, and the construction of social reality. *Dialogue*, 33, 237–252. http://dx.doi.org/10.1017/ S0012217300010519.
- Grove, A. S. (1996). Only the paranoid survive: How to exploit the crisis points that challenge every company. New York, NY: Doubleday.
- Grover, S. L., Hasel, M. C., Manville, C., & Serrano-Archimi, C. (2014). Follower reactions to leader trust violations: A grounded theory of violation types, likelihood of recovery, and recovery process. European Management Journal, 32, 689–702. http://dx.doi.org/10.1016/j.emj. 2014. 01.002.
- Gulati, G. (2014). The proficient manager: Practical advice and tips for becoming a 21st century proficient manager. Bloomington, IN: Partridge India.
- Guo, S.-L., Lumineau, F., & Lewicki, R. J. (2015). Revisiting the foundations of organizational distrust. Foundations and Trends in Strategic Management. Forthcoming. Available at: SSRN http://ssrn.com/abstract=2635002.
- Halaby, C. N. (2004). Panel models in sociological research: Theory into practice. Annual Review of Sociology, 30, 507–544. http://dx.doi.org/10.1146/annurev.soc.30.012703.110629.
- Hobbes, T. (1651/1986). Leviathan (J. P. Mayer, Trans.). Stuttgart: Reclam.
- Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. Academy of Management Journal, 44, 238–251. http://dx.doi.org/10.2307/3069453.
- Johnson, N. D., & Mislin, A. A. (2011). Trust games: A meta-analysis. Journal of Economic Psychology, 32, 865–889. http://dx.doi.org/10.1016/j.joep.2011.05.007.
- Judge, T. A., Colbert, A. E., & Ilies, R. (2004). Intelligence and leadership: A quantitative review and test of theoretical propositions. *Journal of Applied Psychology*, 89, 542–552. http://dx.doi.org/10.1037/0021-9010.89.3.542.
- Khodyakov, D. (2007). Trust as a process: A three-dimensional approach. *Sociology*, 41, 115–132. http://dx.doi.org/10.1177/0038038507072285.
- Korndörfer, M., Egloff, B., & Schmukle, S. C. (2015). A large scale test of the effect of social class on prosocial behavior. PLoS ONE, 10, e0133193. http://dx.doi.org/ 10.1371/journal.pone.0133 193.
- Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology*, 50, 569–598. http://dx.doi.org/10.1146/annurev.psych.- 50.1.569.
- Kroeger, F. (2015). The development, escalation and collapse of system trust: From the financial crisis to society at large. European Management Journal, 33, 431–437. http://dx.doi.org/10.1016/j. emj.2015.08.001.
- Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9, 202–220. http://dx.doi.org/10.1177/1094428105284919.
- Lee, J. D., & See, K. A. (2004). Trust in automation: Designing for appropriate reliance. Human Factors, 46, 50–80. http://dx.doi.org/10.1518/hfes.46.1.50_30392.
- Lewicki, R. J., McAllister, D. J., & Bies, R. J. (1998). Trust and distrust: New relationships and realities. Academy of Management Review, 23, 438–458. http://dx.doi.org/10.5465/AMR.1998.926620.
- Lewicki, R. J., Tomlinson, E. C., & Gillespie, N. (2006). Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions. *Journal of Management*, 32, 991–1022. http://dx.doi.org/10.1177/ 0149206306294405.
- Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. Social Forces, 63, 967–985. http://dx.doi.org/10.1093/sf/63.4.967.
- Luhmann, N. (1968/2014). Vertrauen [Trust] (5th ed.). Konstanz: UVK.
- Machiavelli, N. (1532/2003). The prince (G. Bull, Trans.). London: Penguin.
- Mayer, R. C., & Davis, J. H. (1999). The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology*, 84, 123–136. http://dx.doi.org/10.1037/0021-9010.84.1.123.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. Academy of Management Review, 20, 709–734. http://dx.doi.org/10.5465/AMR.1995.9508080.
- McAllister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38, 24–59. http://dx.doi.org/10.2307/256727.
- McGregor, D. (1960/1987). The human side of enterprise. Middlesex, UK: Penguin.
- Meck, G. (2014, May 4). Was hat dieser Mann mit Siemens vor? [What is this man planning for Siemens?] Frankfurter Allgemeine Zeitung. Retrieved from http://www.faz.net/aktuell/wirtschaft/unternehmen/vorstandschef-joe-kaeser-was-hat-dieser-mann-mit-siemens-vor-12921551.html?TB_iframe=true&height=650&keepThis=true&width =850&caption=Aktuell+
 - iframe=true&height=650&keepThis=true&width =850&caption=Aktuell++FAZ.NET.
- Mooijman, M., van Dijk, W. W., Ellemers, N., & Van Dijk, E. (2015). Why leaders punish: A power perspective. *Journal of Personality and Social Psychology, 109*, 75–89, 10.10 37/pspi0000021.
- Muthén, B. O., & Satorra, A. (1995). Complex sample data in structural equation modeling. Sociological Methodology, 25, 267–316. http://dx.doi.org/10.2307/ 271070.
- Naef, M., & Schupp, J. (2009). *Measuring trust: Experiments and surveys in contrast and combination*. IZA Discussion Paper, 4087. Available at: SSRN http://ssrn.com/abstract = 1369833.
- Nienaber, A. M., Hofeditz, M., & Romeike, P. D. (2015b). Vulnerability and trust in leader-follower relationships. *Personnel Review*, 44, 567–591. http://dx.doi.org/ 10.1108/PR-09-2013-0162.
- Nienaber, A. M., Romeike, P. D., Searle, R., & Schewe, G. (2015a). A qualitative meta-

- analysis of trust in supervisor-subordinate relationships. *Journal of Managerial Psychology*, 30, 507–534. http://dx.doi.org/10.1108/JMP-06-2013-0187.
- Obschonka, M., Andersson, H., Silbereisen, R. K., & Sverke, M. (2013). Rule-breaking, crime, and entrepreneurship: A replication and extension study with 37-year longitudinal data. *Journal of Vocational Behavior*, 83, 386–396. http://dx.doi.org/10.1016/ji.jvb.2013.06.007.
- Oishi, S., Kesebir, S., & Diener, E. (2011). Income inequality and happiness. *Psychological Science*, 22, 1095–1100. http://dx.doi.org/10.1177/0956797611417262.
- Parkhe, A., & Miller, S. R. (2000). The structure of optimal trust: A comment and some extensions. Academy of Management Review, 25, 10–11. http://dx.doi.org/ 10.5465/AMR.2000.15876_047.
- Pollner, M. (1989). Divine relations, social relations, and well-being. Journal of Health and Social Behavior, 30, 92-104. http://dx.doi.org/10.2307/2136915.
- Roberts, B. W. (1997). Plaster or plasticity: Are adult work experiences associated with personality change in women? *Journal of Personality*, 65, 205–232. http://dx.doi.org/10.1111/j.1467-6494.1997.tb00953.x.
- Roberts, B. W., Caspi, A., & Moffitt, T. E. (2003). Work experiences and personality development in young adulthood. *Journal of Personality and Social Psychology*, 84, 582–593. http://dx.doi.org/10.1037/0022-3514.84.3.582.
- Roberts, B. W., Walton, K., Bogg, T., & Caspi, A. (2006). De-investment in work and non-normative personality trait change in young adulthood. *European Journal of Personality*, 20, 461–474. http://dx.doi.org/10.1002/per.607.
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35, 651–665. http://dx.doi.org/10.1111/j.1467-6494.1967.tb01454.x.
- Rotter, J. B. (1971). Generalized expectancies for interpersonal trust. *American Psychologist*, 26, 443–452. http://dx.doi.org/10.1037/h0031464.
- Rotter, J. B. (1980). Interpersonal trust, trustworthiness, and gullibility. *American Psychologist*, 35, 1–7. http://dx.doi.org/10.1037/0003-066X.35.1.1.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after

- all: A cross-discipline view of trust. Academy of Management Review, 23, 393–404. http://dx.doi.org/10.5465/AMR.1998.926617.
- Schilke, O., Reimann, M., & Cook, K. S. (2015). Power decreases trust in social exchange. *Proceedings of the National Academy of Sciences*, 112, 12950–12955. http://dx.doi.org/10.1073/pnas. 1517057112.
- Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment*, 8, 350–353. http://dx.doi.org/10.1037/1040-3590.8.4.350.
- Smith, A. (1776/2000). The wealth of nations. Books IV-V. London: Penguin.
- Specht, J., Egloff, B., & Schmukle, S. C. (2011). Stability and change of personality across the life course: The impact of age and major life events on mean-level and rank-order stability of the Big Five. Journal of Personality and Social Psychology, 101, 862–882. http://dx.doi.org/10.1037/a0024950.
- Steenkamp, J.-B. E. M., De Jong, M. G., & Baumgartner, H. (2010). Socially desirable response tendencies in survey research. *Journal of Marketing Research*, 47, 199–214, 10.15 09/jmkr.47.2.199.
- Tardy, C. H. (1988). Interpersonal evaluations: Measuring attraction and trust. In C. H. Tardy (Ed.), A handbook for the study of human communication (pp. 269–283). Westport, CT: Ablex Publishing.
- Van Lange, P. A. M. (2015). Generalized trust: Four lessons from genetics and culture. Current Directions in Psychological Science, 24, 71–76. http://dx.doi.org/10.1177/0963-721414552473.
- Wagner, G. G., Frick, J. R., & Schupp, J. (2007). The German Socio-Economic Panel Study (SOEP) Scope, evolution and enhancements. *Schmollers Jahrbuch*, *127*, 139–169. http://dx.doi.org/10.2139/ssrn.1028709.
- Wheeless, L. R., & Grotz, J. (1977). The measurement of trust and its relationship to self-disclosure. *Human Communication Research*, 3, 250–257. http://dx.doi.org/10.1111/j.1468-2958.1977.tb00523.x.
- Wu, C., & Wilkes, R. (2016). Durable power and generalized trust in everyday social exchange. Proceedings of the National Academy of Sciences, 113, E1417. http:// dx.doi.org/10.1073/pnas.152353 6113.