emerald**insight**

Employee Relations

Data-based ethical decision making, lateral relations, and organizational
commitment: Building positive workplace connections through ethical operations
Sean Robert Valentine, David Hollingworth, Patrick Schultz,

Article information:

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald
for Authors service information about how to choose which publication to write for and submission
guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company
manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as
well as providing an extensive range of online products and additional customer resources and
services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the
Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for
digital archive preservation.

*Related content and download information correct at time of download.

Data-based ethical decision making, lateral relations, and organizational commitment

Building positive workplace connections through ethical operations

Sean Robert Valentine, David Hollingworth and Patrick Schultz
*Department of Management, University of North Dakota, Grand Forks,
North Dakota, USA*

Abstract

Purpose – Focusing on ethical issues when making organizational decisions should encourage a variety of positive outcomes for companies and their employees. The purpose of this paper is to determine the degree to which data-based ethical decision making, lateral relations and organizational commitment are interrelated in organizations.

Design/methodology/approach – Data were collected from business professionals employed at multiple locations of a financial services firm operating in the USA. Mediation analysis (based on structural equation modeling) was used to test the proposed relationships.

Findings – Results indicated that employees' perceptions of data-based ethical decision making were positively related to perceived lateral relations, and that perceived lateral relations were positively related to organizational commitment.

Research limitations/implications – Given that information was collected using only a self-report questionnaire, common method bias could be an issue. In addition, the study's cross-sectional design limits conclusions about causality. Another limitation involves the study's homogenous sample, which decreases the generalizability of the findings. Finally, variable responses could have been impacted by individual frames of reference and other perceptual differences.

Practical implications – Results suggest that information flow enhancements should support or be consistent with horizontal information flow enhancements, and that together these factors should increase employee commitment.

Originality/value – Given the dearth of existing research, this interdisciplinary investigation is important because it fills gaps in the management literature. This study is also important because the results could inform decisions regarding the use of data analysis in ethical decisions and lateral forms of organizational structuring to improve work attitudes.

Keywords Decision making, Employee attitudes, Employee relations, Business ethics

Paper type Research paper

Introduction

Organizations utilize a variety of approaches to develop and maintain a work context that promotes ethics and other desirable employee characteristics. For example, considerable effort can be dedicated to developing a set of ethical values that highlight important behavioral guidelines (e.g. Herndon *et al.*, 2001; Hunt *et al.*, 1989; Trevino and Nelson, 2011). Additionally, employees can be recruited, selected and socialized in a manner so that they understand the importance of these cultural principles (Fritz *et al.*, 1999; Hunt *et al.*, 1989; Sims, 1991; Valentine *et al.*, 2014). Another mechanism for improving organizational ethics includes managers' adherence to and promotion of ethics through their actions and reinforcement processes (i.e. decisions about rewards and punishments) (Fritz *et al.*, 1999; Hunt *et al.*, 1989; Koh and Boo, 2001; Koonmee *et al.*, 2010; Schwepker, 2001; Trevino *et al.*, 1998; Trevino and Nelson, 2011). The creation of programs such as codes of conduct and ethical training can also support ethics in companies (Koonmee *et al.*, 2010; Ruiz-Palomino *et al.*, 2013; Schwepker, 2001; Trevino and Nelson, 2011).

Despite these effects, the process of ethical decision making often requires access to and evaluation of cognitively complex information, including assessments of individual, situational, organizational factors (Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Jones, 1991; Rest, 1986; Trevino, 1986). Attention directed toward augmented ethical reasoning also increases the complexity of the decision making that occurs in organizations due to the diversity and quantity of information related to the issues addressed. Individual and organizational responses to these information requirements may include enhancements to formal/informal organizational structures and systems for identifying, accessing and evaluating appropriate data for ethical decision making (Rottig et al., 2011). However, changes to structures can dramatically affect (for better or for worse) information processing requirements and capabilities (Eppler and Mengis, 2004). While enhanced information access/flow may be useful for ethical decisions, information overload may lead employees to exercise poor judgment and disengage (Eppler and Mengis, 2004).

One response to increased information needs is the application of information gathering and processing techniques/technologies to facilitate ethical decision making (Brans and Gallo, 2007; Le Menestrel and Van Wassenhove, 2004; Singer and Singer, 1997). Increased information processing capability could contribute to enhanced organizational ethics, which is generally linked to favorable employee attitudes and other positive consequences (e.g. Hunt et al., 1989; Schwepker, 2001; Singhapakdi and Vitell, 2007; Trevino et al., 1998; Viswesvaran et al., 1998). However, some scholars have warned that the use of data-based (or data-driven) decision-making methods and technologies for sifting, sorting, summarizing and facilitating decisions may adversely affect ethical reasoning by obscuring certain issues for decision makers (Brans and Gallo, 2007; Hollingworth, 2014; Le Menestrel and Van Wassenhove, 2004; Singer and Singer, 1997; Trevino and Nelson, 2011; Valentine and Hollingworth, 2012). These conditions may cause ethical conflict among employees as they observe ethical issues that are not effectively recognized and addressed by the organization. Such conflict, if unresolved, may contribute to role stress, decreases in desirable employee attitudes (including job satisfaction and organizational commitment), and increases in turnover (Schwepker, 1999; Schwepker et al., 1997; Valentine et al., 2014). Consequently, data-based decision making in organizations should focus on ethical issues and concerns in order to avoid such conflict.

Employee's perceptions of organizational ethics, organizational structures and accessible information are likely to vary substantially within and across firms. Furthermore, employee responses (i.e. work attitudes and behaviors) to the ethical context of an organization may vary significantly from one employee to the next (Hollingworth and Valentine, 2015; Sutherland and Cressey, 1970). This study, therefore, considers the proposed relationships among individual, micro-level perceptions of data-based ethical decision making and lateral (i.e. positive and interactional) organizational structures in conjunction with employees' organizational commitment. This study focuses on two primary questions. First, how do employee perceptions of data-based ethical decision making affect their organizational commitment? Second, do employee perceptions of lateral relations in organizational structure (Galbraith, 1974) operate to mediate the effect of data-based ethical decision making on employee attitudes?[1]

While prior research has examined rather extensively the connections between organizational ethics and employee attitudes, data-based ethical decision making, a proposed component of corporate ethics, has received little attention. In addition, it is not clear whether data-based ethical decision making has a positive or negative effect on firms and employees, particularly given that data-driven considerations in companies can sometimes substantially limit assessments of the ethical criteria that are used in decision making (e.g. Hollingworth, 2014; Trevino and Nelson, 2011). Ideally, data-based ethical decision making in organizations would lead to the development of positive and interactional

structures that facilitate the increased information processing demands placed on employees to make more effective decisions; a likely benefit of these structures would include more positive employee work attitudes. In this regard, the interplay between data-based ethical decision making and organizational structures that facilitate information flow, as well as the resultant effects on employee attitudes such as organizational commitment, requires further inquiry.

Investigating these relationships is important given that there is a dearth of existing research that integrates these specific variables. This study therefore seeks to fill important research gaps in the operations, management, organizational theory, and business ethics literatures. These contributions are highly relevant given the need for more interdisciplinary work that explores the salient overlap of business ethics research and other key areas of management inquiry. This study is also important from a practical perspective because the results could inform decisions regarding the use of data analysis in ethical decisions and lateral forms of organizational structuring to improve work attitudes. These connections are critical given that organizations invest heavily in initiatives that help develop ethical contexts and cultures, with the intention of facilitating principled decision-making processes, positive, interactional, and productive work environments, and motivated/committed employees. The following sections outline the relevant literature and present the study's working hypotheses.

Literature review
Data-based ethical decision making
Jones (1991) proposed that the organizational environment, a factor capturing various facets of organizational culture, climate or context, may affect ethical decision making in organizations. Organizational culture is often described in terms of shared ideas, preferences and behavioral expectations that are advanced in a company (Hunt *et al.*, 1989; Schein, 1996). In the ethics literature, the ethical culture of an organization is viewed as a subset of organizational culture (Trevino and Nelson, 2011). It has been conceptualized and operationalized as a unidimensional construct (e.g. Hunt *et al.*, 1989; Schwepker, 2001), and more recently as multidimensional (e.g. Kaptein, 2008; Trevino *et al.*, 1998). Conceptual discussion of organizational ethical culture often includes formal and/or informal aspects of culture, including training efforts, ethical codes of conduct, manager, supervisor, and peer behavior, and norms concerning ethics (e.g. Ruiz-Palomino and Martinez-Canas; 2014; Trevino *et al.*, 1998). A company's ideas, preferences and expectations regarding data-based decision making are not typically reflected in existing conceptualizations or measures of ethical organization culture, climate or context. Therefore, in order to more fully investigate conflicting statements in the literature regarding the impact of data-based ethical decision making, it is necessary to define and develop a conceptualization of the construct.

Hollingworth (2014) observed that the literature exploring the intersection of data analysis and ethics (e.g. Brans and Gallo, 2007; Gallo, 2004; Le Menestrel and Van Wassenhove, 2004; Singer and Singer, 1997; Trevino, 1986) is relatively sparse and appears to be focused primarily on "[…] the ethicality of mathematical modeling and how ethics can or should be integrated into decision making that depends heavily on mathematical models" (Hollingworth, 2014, p. 139). Hollingworth (2014) described characteristics of data-based/data-driven decision making as including a "culture" that exhibits a preference for data that is "quantifiable," "objective," and "unbiased"; the presence of such a context demonstrates a distinct preference for the substantial involvement of quantitative (e.g. mathematical) analysis of data in the process of decision making. Provost and Fawcett (2013, p. 53) define data-driven decision making as "[…] the practice of basing decisions on the analysis of data rather than purely on intuition." However, the domain of data-based decision making is not limited strictly to the use of data and the analysis of data, but it includes all of the activities "[…] throughout the process of model design, development, implementation, and use, and in the selection of data, the

analysis of data, the interpretation of analysis, and the application of results and their interpretation to a decision" (Hollingworth, 2014, p. 152).

For the purposes of this study, we define data-based (or data-driven) ethical decision making as one of several aspects of culture-based ethical reasoning that occurs in organizations. As one indicator of organizational ethics, it is more narrowly defined than traditional measures of organizational ethical culture, context or climate. The construct's conceptual domain is comprised of the intersection of ideas, preferences and expectations regarding the activities and systems associated with data acquisition and analysis; elements and indicators of organizational ethics; and decision-making processes within the organization. As such, it excludes many of the factors typically included in existing conceptualizations of organizational ethics. The conceptual domain of data-based ethical decision making does not include ethical decision making *per se*. In other words, it is does not include the ethical decision-making process, nor does it include individual ethical decisions, but rather, it is an individual employee's perception of what is occurring within the organization. Furthermore, data-based ethical decision making does not exist as an objective reality, but as subjective interpretations (or perceptions) on the part of employees who work for the organization. While the variable can be viewed as existing at either the organizational or individual levels, differential association theory (Sutherland and Cressey, 1970) suggests that variability is likely to exist between individual employees within the organization; we, therefore, argue that the individual level of analysis is the most appropriate approach for investigating this factor.

Data-based ethical decision making and lateral relations

One of the ways that an ethical context emerges occurs through the relationship between the ethical decision-making tasks of organization members and the firm's capacity to process information. This perspective is based on the information processing view of organizations (Galbraith, 1974; March and Simon, 1958; Simon, 1960; Tushman and Nadler, 1978; in the context of modern management information systems, see Premkumar *et al.*, 2005). The basic tenet of this long-established approach is that decision making in companies is influenced by the information needed to minimize uncertainty, and the structural forms of organizations are developed to manage that information flow. Uncertainty produces an information processing requirement/need within a firm, while the firm's design creates an information processing capability; making sure that these requirements/needs and capabilities function together effectively facilitates positive decision making and better performance.

Decision making is a fundamental feature of organizations (Miller *et al.*, 1996), and based on research about rational choice models of decision making, is often characterized by two types of decision tasks. As decision-making environments become more complex and novel—that is, as uncertainty surrounding decisions increases (Premkumar *et al.*, 2005; Tushman and Nadler, 1978)—managers shift from repetitive and programmed decisions to more challenging non-programmed decisions (Simon, 1960). A simple work environment may present more frequent and familiar decision-making tasks, leading to relatively straightforward solutions. Complex decision environments may require unique or infrequent decisions, and involve more variables or uncertain outcomes. Non-programmed decisions, being characterized as unusual compared to typical repetitive decisions, require additional information and possibly data that is more difficult to collect.

Ethical considerations present an additional component for the decision maker to consider and increase the complexity of the decision-making task. Routine and programmed decisions often simplify decision making by abstracting away more difficult and harder to identify and/or quantify issues such as ethical concerns (Hollingworth, 2014). However, complex decisions may run this same risk, again, through a desire to simplify what is

perceived to be too complex to deal with otherwise. To ensure that ethical issues are incorporated into decision making, organizations may explicitly focus on gathering ethical information relevant to those issues and integrating it into the decision-making process. Alternatively, it may also involve increased data collection and analysis in ethical decision making. Data-based ethical decision making is a manifestation of this type of practice. The data and analysis necessarily includes and places particular emphasis on ethical issues and considerations. As such, data-based ethical decision making likely reflects the organization's ethical culture, context, climate and values. Further, enhanced information and analysis systems increase information processing capability in organizations (Galbraith, 1974). Data-based ethical decision making, therefore, provides a way for firms to effectively deal with the increased information load inherent in the ethical reasoning processes that occur throughout an organization.

The increased complexity that organizations face as they exert effort to be more ethical can transform routine/programmed decisions into more complex ones. Likewise, non-routine and complex decisions also become more complicated as well. Organizations attempting to be ethical, therefore, face an increasingly complex decision-making environment. More complex decision-making environments and their typically associated non-programmed decisions increase the information load on organizations. As the information demanded by the decision-making environment expands and grows in scope, organizations will adopt structures to help individuals better gather and process the information they need to make decisions (March and Simon, 1958). When the environment of an organization increases in complexity, organization structures will also shift from more bureaucratic forms to more differentiated ones along with more functional integration like direct lines of communication and team-based coordination (Burns and Stalker, 1961; Lawrence and Lorsch, 1967). As ethical issues arise as an important feature of decision making, an organization may also implement practices and structures that incorporate the value of ethical concerns and their importance in daily life, establishing how people across the firm work together to make decisions that recognize ethical issues.

One way that organizations support ethical decision making within the workplace is through the facilitation of lateral relations. These are horizontally oriented organizational mechanisms and structures that facilitate effective decision making through integrated and coordinated cross-functional communication. Examples include integrating or liaison managers, task forces and teams (Galbraith, 1974). Improved lateral relations are one form of information flow enhancement within organizations that facilitates improved organizational performance. In the present context, we understand that part of improved organization performance necessarily includes improved ethical decision making. As firms engage in increased data-based ethical decisions making and enhanced vertical information flow, this creates an environment where enhanced ethical information flow within the organization is valued and facilitated. This should encourage the development of additional approaches to improved information flow (e.g. horizontal or lateral relations), further enhancing the organization's capacity to effectively address ethical challenges/opportunities. Consequently, the following hypothesis is presented:

   H1. Strengthened employee perceptions of data-based ethical decision making are associated with increased perceptions of lateral relations.

Lateral relations and organizational commitment
Over time, as organization members work together within organizational structures and processes that are less mechanistic it appears probable that incremental improvements in employee attitudes (e.g. commitment to the organization) will be experienced. For instance, work environments where employees have a great deal of latitude in governing their own

activities affect job satisfaction and absenteeism (Schriesheim *et al.*, 1979). Using a large international sample of knowledge professionals, Pentareddy and Suganthi (2015) indeed determined that psychological empowerment partially mediated the positive relationship between desirable job traits and commitment. Organizational structures that employ a high level of task interdependence requiring people to work together may also positively influence commitment to the organization (Mathieu and Zajac, 1990; Schriesheim *et al.*, 1979) by enhancing an individual's awareness of their contribution to the effort of the work group or the entire organization. Valentine and Hollingworth (2015) determined that business professionals' perceptions of organizational strategy communication were positively related to perceived decision-making coordination, and that this coordination was associated with stronger beliefs that the organization had ethical values. These findings suggest that other generalized work attitudes might also be positively affected by integrated and coordinated workplace efforts.

Fostering an organization with a rich flow of information should establish trust among organization members, requiring both task and non-task related communication to build a "community spirit" that promotes morale and supportive attitudes and commitment from people (De Ridder, 2004). Organizational structures and practices that involve participation by members in important decision-making processes, diffuse responsibility and decision making throughout the organization, and consistently invest in and reinforce participation and consensus building among organization members result in greater employee empowerment and organizational commitment (Butts *et al.*, 2009; Cox *et al.*, 2009; Lincoln and Kalleberg, 1985). We, therefore, offer the hypothesis:

H2. Strengthened employee perceptions of lateral relations are associated with increased organizational commitment.

Data-based ethical decision making and organizational commitment
While data-based ethical decision making should precipitate lateral relations through an enhanced ethical culture and principled business values, there is reason to believe that an ancillary benefit of this work context should be that employees will possess more positive work attitudes (e.g. Jaramillo *et al.*, 2006; Koonmee *et al.*, 2010; Ruiz-Palomino *et al.*, 2013; Schwepker, 2001). According to Herndon *et al.* (2001, p. 74), a range of beneficial "[…] outcomes of an ethical value structure may be increased organizational commitment and job satisfaction, and decreased turnover." Prior research has established that stakeholders want to be associated with ethical organizations, and that employee attitudes are generally more positive in organizations that they perceive to be ethical or socially responsible (e.g. Fritz *et al.*, 1999; Hollingworth and Valentine, 2014; Jaramillo *et al.*, 2006; Singhapakdi and Vitell, 2007; Trevino and Nelson, 2011; Valentine *et al.*, 2013; Viswesvaran *et al.*, 1998). Therefore, it is likely that higher levels of data-based ethical decision making will be associated with higher levels of employee work attitudes and behaviors, such as satisfaction, commitment and citizenship.

The connection between data-based ethical decision making and organizational commitment should be particularly compelling. When an employer focuses on building organizational ethics by institutionalizing a set of guidelines, values and codes that positively shape decision making and behavior, employees should experience a stronger psychological contract (Sims, 1991; Valentine *et al.*, 2002) and be subjected to far less cognitive dissonance in the workplace (Koh and Boo, 2001; Viswesvaran and Deshpande, 1996; Viswesvaran *et al.*, 1998). They should also be more likely to believe that the company has a stronger identity comprised of ethical values (Fritz *et al.*, 1999), and that justice is valued by the firm (Koh and Boo, 2001). These perceptions among employees are likely to drive an increased identification with corporate values and an attachment to the organization (i.e. increased motivation and retention), resulting in increased organizational commitment.

Previous research supports these relationships. For instance, Hunt *et al.* (1989) concluded that perceptions of corporate ethical values were associated with the organizational commitment of various marketing professionals. Trevino *et al.* (1998) also determined that several measures of ethical context were associated with increased organizational commitment among college alumni. Using a sample of sales professionals from the USA and Taiwan, Herndon *et al.* (2001) found that stronger perceptions of ethical climate yielded increased organizational commitment; Schwepker (2001) reported a similar positive relationship between ethical climate and commitment using a sample of business-to-business selling professionals. Koonmee *et al.* (2010) also provided evidence that the institutionalization of organizational ethics was positively related to the organizational commitment of human resource managers working for firms located in Thailand. Finally, Ruiz-Palomino *et al.* (2013) found that, among banking professionals working in Spain, increased affective commitment resulted from a stronger ethical culture. The following hypotheses are, therefore, presented:

H3. Strengthened employee perceptions of data-based ethical decision making are associated with increased organizational commitment.

H4. Employee perceptions of lateral relations will partially mediate the positive relationship between perceptions of data-based ethical decision making and organizational commitment.

A summary of the study's proposed relationships is provided in Figure 1. The first model indicates that lateral relations will function as a full mediator between data-based ethical decision making and organizational commitment. The second model shows that the three focal variables are simultaneously interrelated, indicating the presence of partial mediation. Specifying two models facilitates analysis of the additional constraint (data-based ethical decision making → organizational commitment to determine whether the relationship is significant, and the addition of the parameter significantly reduces the model χ^2 value by examining the results of a χ^2 difference test. The next section provides a summary of the study's data collection, measurement and statistical approaches.

Method
Data collection
A questionnaire containing ethics and operations measures was developed and distributed via e-mail to over 500 individuals who were working for a financial services firm with locations in the upper Midwestern and Southwestern USA. The study of smaller banking organizations presents a unique opportunity to assess the relationship among ethical business practices, operations management and employee work attitudes because, anecdotally speaking, these institutions did not participate in scandals associated with larger banking firms and therefore, they are often considered to be more ethical in orientation. While there are some inherent limitations, collecting information from employees in one such organization should provide appropriate data because differential association theory suggests that differences in the social context and individual characteristics can interact to precipitate different individual responses and sufficient variation (Sutherland and Cressey, 1970).

The first wave of e-mailed questionnaires generated 144 responses, the second wave generated 27 responses and the third wave generated 16 responses, providing a total of 187 questionnaires and an approximate overall response rate of 35.5 percent[2]. Based on procedures outlined by Armstrong and Overton (1977), analysis of response differences across the three waves (using ANOVA and cross-tabulations/χ^2 statistics) revealed no differences among the focal variables explored in this study at the 0.05 level of significance, and significant differences for job tenure and employee age. These findings indicated the unlikely presence of nonresponse bias.
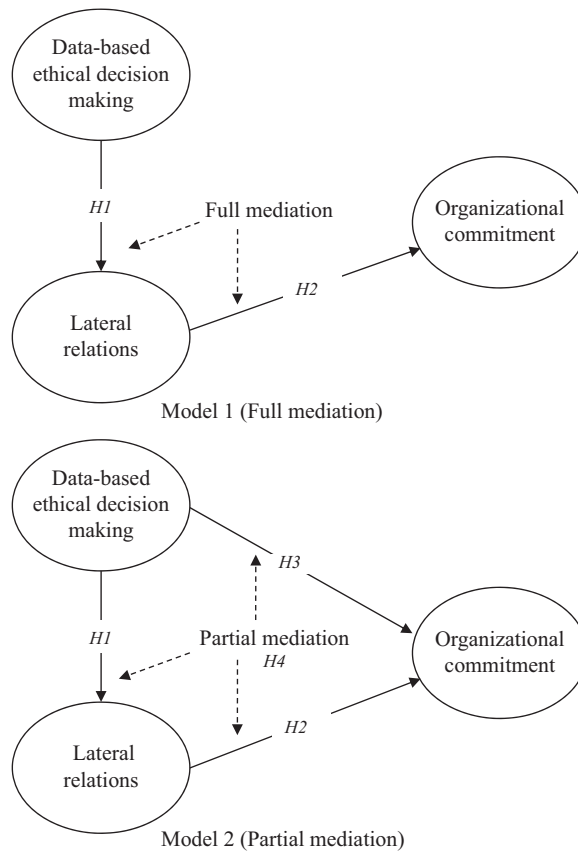
Individual responses to demographic items indicated that employees were mainly white (over 99 percent), female (65.3 percent), married (72.4 percent) and working full-time (over 85 percent). More than half of individuals (57 percent) reported having at least a bachelor's degree, indicating that the sample was fairly well-educated. Average positional tenure was 6.25 years and organizational tenure was 6.47 years. Around 73 percent of persons did not have supervisory or managerial responsibility. Individual were working in different functional areas of the financial services firm, with 22.9 percent in sales/marketing, 17.4 percent in customer service and 16.7 percent in operations. A majority of individuals (91 percent) were aware of an ethics code, and in the most recent year they received an average of 1.63 h of ethics training.

Measures
A mix of new and pre-existing scales were used in this study to measure the focal constructs. However, some items required slight modifications for data collection in a service-oriented banking institution. All items were evaluated with a seven-point scale comprised of 1 (strongly agree) and 7 (strongly disagree); the direction of the coding was set to indicate higher variable values.

Data-based ethical decision making was measured with four items developed and/or adapted to evaluate how decisions are made in companies by referencing quantitative and

other data issues[3]. More specifically, this construct reflects the degree to which employees perceive that generalized and ethical decision making occurs throughout organizations based on data considerations, thus providing an assessment of social norms and work practices. These items are "When decisions are made in this organization, they are based primarily on data and careful analysis of the 'numbers'", "In this organization, decision makers are strongly encouraged to gather data about all the decision issues and to carefully analyze the data before making a decision," "Data about important ethical issues is gathered and used when people in this organization make decisions" and "The procedures that decision-makers use in this firm always include the use of data that reflects ethical considerations."

Lateral relations (Galbraith, 1974) was measured with two scales, coordination of decision-making (four items) and functional integration (five items), adapted from the work of Morita and Flynn (1997) and Flynn and Flynn (1999). The coordination of decision making items include "Generally speaking, everyone in my organization works well together," "Departments in my organization communicate frequently with each other," "Departments within my organization seem to be in constant conflict," and "Management works together well on all important decisions." The functional integration items are "At our company, operations are centrally involved in marketing and product/service decisions," "The functions of our firm are well integrated," "Departments are in constant conflict with each other," "The functions in our company work well together" and "Marketing and finance know a great deal about operations." Composite measures were developed for these two scales by averaging their associated item scores, and the coordination of decision making and functional integration measures were used together to indicate how well work areas communicated and organized so that work could be completed.

Organizational commitment was evaluated with nine items taken from the Organizational Commitment Questionnaire (Mowday et al., 1979). This measure taps the degree to which individuals share common values with an employer and are proud about their membership in a company. Sample items include "I really care about the fate of this organization" and "For me, this is the best of all organizations for which to work." Finally, given that subjects likely approached the completion of the questionnaire in unique ways, responding to the variable items from different angles based on their individual frames of reference, we included their job tenure ("How many years have you worked in your present job?") and their status as managers/supervisors ("Are you currently a manager or supervisor in your organization?" "no"—coded as 1 and "yes"—coded as 2) as control variables in the analysis.

Analysis
Both the SPSS 24 and AMOS 24 programs were used to evaluate the data. An initial confirmatory factor analysis (CFA) was specified to determine the measurement properties of the variables[4], and adjustments were made by making modifications to the models based on procedures established by Anderson and Gerbing (1988). Composite reliability and variance extracted statistics provided further assessments of the scales' measurement properties. A single-factor test was then specified to check for the presence of common method bias. The relevant descriptive statistics, correlations (pairwise deletion) and coefficient αs for each scale were also assessed to determine variable magnitude and bivariate relationships. Hypothesis testing was conducted by specifying a full mediation framework (Model 1) followed by a partial mediation framework (Model 2) (see James and Brett, 1984; James et al., 2006; Schneider et al., 2005), with a χ^2 difference test being utilized to detect model differences.

Results
Confirmatory factor analysis
The initial CFA showed generally acceptable fit statistics (see Table I). The measurement model indicated that the observed items were strongly associated with the latent constructs

($p < 0.001$), but one data-based ethical decision-making item ("When decisions are made in this organization, they are based primarily on data and careful analysis of the 'numbers'") and two organizational commitment items ("I am willing to put in a great deal of effort beyond that normally expected, in order to help this organization be successful" and "I would accept almost any type of job assignment in order to keep working for this organization") had loadings below 0.495, so these items were deleted from the initial model. A revised CFA was specified, and findings showed improved model fit (see Table I) with significant parameter estimates ($p < 0.001$) and factor loadings equal to or above a value of 0.598. These findings provided evidence that the study's variables demonstrated acceptable convergent validity. The variables of interest were positively interrelated with significant covariances ($p < 0.001$).

Further measurement checks were conducted. The calculated composite reliability and variance extracted statistics (using standardized regression weights; see Hair *et al.*, 1998) for data-based ethical decision making (0.875/0.707), lateral relations (0.875/0.777) and organizational commitment (0.935/0.676) were highly acceptable. Discriminant validity was evaluated for each construct by comparing the variance extracted scores with the calculated squared correlations among the variables; results indicated adequate discriminant validity (Fornell and Larcker, 1981). Given that all information was collected with a self-report questionnaire, a single-factor model was also specified to evaluate the potential for common method bias (Podsakoff *et al.*, 2003). Results showed poor model fit (see Table I) and inconsistent standardized loadings, indicating that common method bias was not a concern.

Variable descriptive statistics, correlations and coefficient αs
Table II provides a summary of the variable descriptive statistics, correlations and coefficient αs generated by SPSS. Mean scores for the focal constructs ranged from 4.822 to 5.867, indicating relatively high data-based organizational ethical decision making, lateral relations and organizational commitment. Standard deviations for data-based organizational ethical decision making, lateral relations and organizational commitment were 1.064, 1.053 and 1.032, respectively, indicating that adequate variance existed in the focal variables of the study. Furthermore, the focal variables were all interrelated, as evidenced by the significant correlations ($p < 0.001$). The control variables were positively

Model	χ^2	df	p	χ^2/df	RMSEA	NFI	IFI	CFI
Initial confirmatory factor analysis	210.691	87	0.000	2.422	0.087	0.870	0.920	0.918
Revised confirmatory factor analysis	102.305	51	0.000	2.006	0.074	0.927	0.962	0.961
Single-factor model	423.268	54	0.000	7.838	0.192	0.700	0.728	0.723
Model 1 (Full mediation framework)	122.732	70	0.000	1.753	0.064	0.916	0.962	0.961
Model 2 (Partial mediation framework)	122.521	69	0.000	1.776	0.065	0.916	0.961	0.960

Table I.
Model fit statistics

Notes: $n = 187$. χ^2/df, relative χ^2; RMSEA, root mean square error of approximation; NFI (Delta 1), normed fit index; IFI (Delta 2), incremental fit index; CFI, comparative fit index

Variable	M	SD	N	α	1	2	3	4	5
1. Data-based ethical decision making	4.856	1.064	139	0.856	–				
2. Lateral relations	4.822	1.053	142	0.867	0.572***	–			
3. Organizational commitment	5.867	1.032	142	0.934	0.388***	0.579***	–		
4. Job tenure	6.250	7.146	138	–	−0.032	−0.129	0.150	–	
5. Manager/supervisor	1.270	0.446	144	–	−0.119	0.036	0.211*	0.211*	–

Table II.
Variable descriptive statistics, correlations and coefficient αs
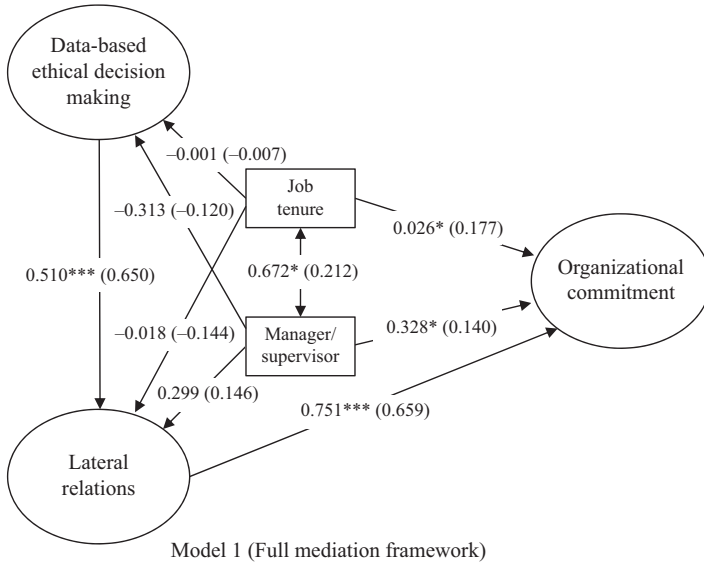
Notes: *$p < 0.05$; ***$p < 0.001$

related ($p < 0.05$), and being a manager or supervisor was positively related to organizational commitment ($p < 0.05$). The coefficient alpha values were all above 0.70, which demonstrates adequate internal consistency reliability.

Data-based ethical decision making

Structural models with mediation analyses
The full mediation framework (Model 1 in Figure 2) provided acceptable fit statistics (see Table I), and the observed items were positively related to the unobserved constructs

Model 1 (Full mediation framework)

Model 2 (Partial mediation framework)
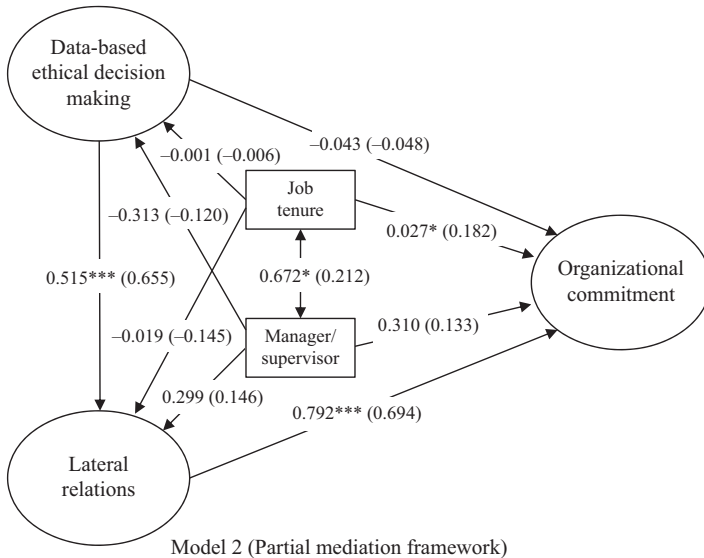
Notes: *$p < 0.05$; ***$p < 0.001$

Figure 2.
Results of mediation analysis

($p < 0.001$). Data-based ethical decision making was positively related to lateral relations ($p < 0.001$), and lateral relations was positively related to organizational commitment ($p < 0.001$). With regard to the control variables, job tenure was positively related to organizational commitment ($p < 0.05$), and being a manager/supervisor was positively related to organizational commitment ($p < 0.05$). These results provided support for the *H1* and *H2* and suggested that full mediation was present among the variables.

An additional constraint (path between data-based ethical decision making and organizational commitment) was added to the model in order to specify a partial mediation framework (Model 2 in Figure 2). The results provided acceptable fit statistics (see Table I). Once again, data-based ethical decision making was positively related to lateral relations ($p < 0.001$), and lateral relations was positively related to organizational commitment ($p < 0.001$). Data-based ethical decision making was unrelated to organizational commitment, indicating a lack of support for *H3*. Job tenure was again positively related to organizational commitment ($p < 0.05$). A χ^2 different test was conducted to determine whether the partial mediation model was superior to the full mediation model. The χ^2 difference (0.211) with one degree of freedom was not significant ($p > 0.50$), indicating that the addition of the constraint did not provide a statistically superior model. This finding provided support for a full mediation interpretation of the relationships among the study's variables and refuted *H4*.

Discussion
The findings of this investigation indicated that stronger perceptions of data-based ethical decision making were associated with stronger beliefs that the organization utilized lateral relations, measured as coordinated decision making and functional integration. Stronger beliefs in lateral relations were also associated with increased organizational commitment among employees. Finally, a direct relationship between data-based ethical decision making and organizational commitment was not identified, and Model 2 (the framework specifying partial mediation) did not provide a significant improvement over Model 1 (the framework specifying full mediation). The results showed that lateral relations fully mediated the relationship between data-based ethical decision making and organizational commitment. These findings present several critical managerial and research implications for organizational and operational ethics.

Prior research has rarely (if ever) examined theoretically or empirically the possibility of a relationship between data-based ethical decision making and lateral relations. However, the existence of a strong positive relationship between these variables appears to be consistent with the information processing view of the firm (e.g. Galbraith, 1974), as well as related perspectives on organizational design and organization theory (e.g. Burns and Stalker, 1961; Lawrence and Lorsch, 1967; Simon, 1960; etc.). This result suggests that information flow enhancement appears to be compatible with a data-based ethical culture/climate. This suggests multiple avenues that organizations may pursue to increase information processing capacity and facilitate the institutionalization of an effective and enduring organizational ethical context.

The theoretical basis for a lateral relations-organizational commitment linkage is both well-established and supported in prior research. Therefore, the results observed in this study are not particularly surprising in that respect. What is surprising is that information flow enhancements related to ethical decision making (in the present study, data-based organizational ethical decision making) did not directly influence organizational commitment, but rather, the effect appeared to function entirely through stronger lateral relations. Several things are worth noting here. The role of lateral relations as a full mediator between data-based ethical decision making and lateral relations appears to have a more proximal linkage with organizational commitment than data-based organizational ethical decision.

This may occur because employees are more likely to be directly influenced by and participate in lateral relations as compared to data-based organizational ethical decision making.

Other reasons may exist as well. For instance, even though ethical context is known to enhance employee work attitudes (e.g. Fritz *et al.*, 1999; Hollingworth and Valentine, 2014; Hunt *et al.*, 1989; Jaramillo *et al.*, 2006; Koh and Boo, 2001; Koonmee *et al.*, 2010; Schwepker, 2001) data-based ethical decision making may be viewed as a separate component of this environment, one that is less connected to opinions of the immediate workplace. Employees might also believe that data-based ethical decision making is expected, making it less of a reflection of ethical context because it is not discretionary in nature. Further investigation of a "hierarchy" of other relationships among information facilitating mechanisms (this study only considers one of the four means of enhancing organizational information flow identified by Galbraith, 1974) as they relate to ethical decision making and employee attitudes and behaviors may prove valuable.

Results from this study provide some interesting implications for managers. They suggest that information flow enhancements (e.g. data-based ethical decision making) should be expected to support or be consistent with horizontal information flow enhancements (e.g. lateral relations), and that together these factors should be expected to increase employee commitment. To the extent that additional studies confirm these finding in other firms, and at higher levels of analysis, these insights provide managers with actionable information regarding the implementation of data-based ethical decision making.

Some scholars have argued that data-based ethical decision making may adversely affect ethical decision making or ethical outcomes (e.g. Brans and Gallo, 2007; Gallo, 2004; Hollingworth, 2014; Le Menestrel and Van Wassenhove, 2004; Singer and Singer, 1997; Trevino and Nelson, 2011). Organization decision making that adversely affects perceptions of organizational ethics is likely to adversely influence employee attitudes, as prior research has identified a linkage between organizational ethics with employee attitudes (e.g. Hunt *et al.*, 1989; Trevino *et al.*, 1998; Valentine *et al.*, 2002). The findings of this study do not support the argument that data-based organizational ethical decisions will have an adverse impact on employee attitudes. Rather, they suggest an interesting possibility: that lateral relationships in the organization mediate the impact of data-based ethical decision making on employee attitudes. These results should provide managers with some reassurance that the implementation of data-based ethical decision making is more likely to have a positive influence in their organization, rather than a negative one—at least in terms of employee attitudes. In this regard, various ethics programs might be used to encourage such ethics-based decision making. Codes of conduct could focus on the values/principles that encourage more informed ethical decision making, and ethics training could emphasize attention to data that enhances employees' ability to reason ethically.

There are a number of limitations to this research that should be recognized. For instance, the information was collected from individuals using only a self-report questionnaire, so common method bias could be an issue; however, the single-factor test indicated that such bias was far from an overwhelming limitation. In addition, the study has a cross-sectional design, which greatly limits the ability to develop definitive conclusions about causality. It is possible that the specified variable relationships function in the opposite direction, yet the existing theory and research suggest otherwise. Another limitation involves the study's use of data from business professionals working in just one banking organization, which decreases the generalizability of the findings due to a lack of individual, geographical and organizational diversity. Finally, despite controlling for job tenure and manager/supervisor status, subject responses could have been impacted by individual frames of reference and other perceptual differences regarding the variables measured; objective data were not used in this investigation.

It is conceivable that under certain information processing circumstances, data-based ethical decision making may negatively impact organization commitment. As individuals perceive that more information is considered in decision making, they may become overloaded. In response to information overload, those individuals may exhibit a number of responses such as disengagement, lessened motivation and satisfaction and stress (Jacoby, 1984; Eppler and Mengis, 2004). Furthermore, the information load on organization members may be represented by different dimensions, information quality and quantity, which will likely have different effects on organizational commitment (Keller and Staelin, 1987). Because of these factors, additional work must be done to fully understand the relationship between data-based ethical decision making and organizational commitment.

There may be other variables aside from organizational commitment that are subject to information processing factors that this study did not examine, despite playing a crucial role in this overarching domain. For instance, ethical behavior also likely plays a role here but complicates the model, particularly with respect to the perception of lateral relations. The transaction cost economics literature suggests that integrating mechanisms could be used to help reduce opportunistic behaviors among participants, reducing risk and establishing clear expectations about conduct (Williamson, 1991; for examples of how integration across supply chains influence ethical behavior, see Tang and Zimmerman, 2013). Establishing the relationships among other variables with data-based ethical decision making provides numerous opportunities for future research.

This study assumes that data-based ethical decisions are positively influenced by the organizational ethical context. Future studies should explicitly test that relationship to verify (or refute) the existence of such a linkage. Hollingworth (2014) notes that without exception the abstraction of information in data collection and analysis is a common characteristic of every quantitative analysis, no matter how true the model is to reality. Further, "[…] the potential disadvantage of reducing the value of human life to quantitative terms should be clear. Such simplification can remove moral criteria from the decision-making process and reduce ethical awareness" (Trevino and Nelson, 2011, p. 104). These warnings suggest the need to examine whether data-based ethical decision making helps or hinders organizational members' decisions.

In conclusion, this study provides new insights as it develops and examines relationships among data-based organizational ethical decision making, lateral relations (a horizontal form of information flow enhancement) and employees' organizational commitment. These constructs are viewed from the perspective of individuals, providing insights into how employees at the micro-level respond to their experiences within the organizational context. The finding that lateral relations fully mediates the relationship between data-based ethical decision making and organizational commitment suggests that more attention is needed to fully elucidate how these relationships might be effectively triggered and managed.

Notes

1. In order to provide answers to these questions, two structural equation models are specified in this study, one full mediation model and one partial mediation model. This approach enabled us to conduct a χ^2 difference test to determine if the extra constraint in the partial mediation model (independent variable → dependent variable) was significant and significantly reduced the overall model χ^2.

2. Subjects were provided three opportunities to complete the questionnaire at three different points in time to encourage greater participation in the research project, which facilitated a nonresponse bias test. However, it was assumed that different individuals responded to the questionnaire at these different points in time, so there was no way to determine causality from a longitudinal perspective.

3. Items were developed and/or adapted based on an understanding of the operations management and business ethics literatures; the goal was to advance a set of items that tapped how individuals balance ethical and data considerations when making decisions at work, a key issue that is fraught with ethical concerns.

4. One path for each latent construct is set to a value of "1," and maximum likelihood estimation was used.

References

Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-423.

Armstrong, J.S. and Overton, T.S. (1977), "Estimating nonresponse bias in mail surveys", *Journal of Marketing Research*, Vol. 14, pp. 396-402.

Brans, J.P. and Gallo, G. (2007), "Ethics in OR/MS: past, present and future", *Annals of Operations Research*, Vol. 153 No. 1, pp. 165-178.

Burns, T. and Stalker, G.M. (1961), *The Management of Innovation*, Tavistock Publications, London.

Butts, M.M., Vandenberg, R.J., DeJoy, D.M., Schaffer, B.S. and Wilson, M.G. (2009), "Individual reactions to high involvement work processes: investigating the role of empowerment and perceived organizational support", *Journal of Occupational Health Psychology*, Vol. 14 No. 2, pp. 122-136.

Cox, A., Marchington, M. and Suter, J. (2009), "Employee involvement and participation: developing the concept of institutional embeddedness using WERS2004", *International Journal of Human Resource Management*, Vol. 20 No. 10, pp. 2150-2168.

De Ridder, J.A. (2004), "Organisational communication and supportive employees", *Human Resource Management Journal*, Vol. 14 No. 3, pp. 20-30.

Eppler, M.J. and Mengis, J. (2004), "The concept of information overload: a review of literature from organization science, accounting, marketing, MIS, and related disciplines", *The Information Society*, Vol. 20 No. 5, pp. 325-344.

Ferrell, O.C. and Gresham, L.G. (1985), "A contingency framework for understanding ethical decision making in marketing", *Journal of Marketing*, Vol. 49, pp. 87-96.

Flynn, B.B. and Flynn, E.J. (1999), "Information-processing alternatives for coping with manufacturing environment complexity", *Decision Sciences*, Vol. 30 No. 4, pp. 1021-1052.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobserved variables and measurement error", *Journal of Marketing Research*, Vol. 18, pp. 39-50.

Fritz, J.M., Arnett, R.C. and Conkel, M. (1999), "Organizational ethical standards and organizational commitment", *Journal of Business Ethics*, Vol. 20 No. 4, pp. 289-299.

Galbraith, J.R. (1974), "Organization design: an information processing view", *Interfaces*, Vol. 4 No. 3, pp. 28-36.

Gallo, G. (2004), "Operations research and ethics: responsibility, sharing and cooperation", *European Journal of Operational Research*, Vol. 153 No. 2, pp. 468-476.

Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, Prentice Hall, Upper Saddle River, NJ.

Herndon, N.C. Jr, Fraedrich, J.P. and Yeh, Q. (2001), "An investigation of moral values and the ethical content of the corporate culture: Taiwanese versus US sales people", *Journal of Business Ethics*, Vol. 30 No. 1, pp. 73-85.

Hollingworth, D. (2014), "Ethical decision-making in the operations function of organizations: managerial challenges and opportunities", in Valentine, S. (Ed.), *Organizational Ethics and Stakeholder Well-Being in the Business Environment*, Information Age Publishing, Charlotte, NC, pp. 137-165.

Hollingworth, D. and Valentine, S. (2014), "Corporate social responsibility, continuous process improvement orientation, organizational commitment and turnover intentions", *International Journal of Quality & Reliability Management*, Vol. 31 No. 6, pp. 629-651.

Hollingworth, D. and Valentine, S. (2015), "The moderating effect of perceived organizational Ethical context on employees' ethical issue recognition and ethical judgments", *Journal of Business Ethics*, Vol. 128 No. 2, pp. 457-466.

Hunt, S.D. and Vitell, S. (1986), "A general theory of marketing ethics", *Journal of Macromarketing*, Vol. 8 No. 1, pp. 5-16.

Hunt, S.D., Wood, V. and Chonko, L. (1989), "Corporate ethical values and organizational commitment in marketing", *Journal of Marketing*, Vol. 53, pp. 79-90.

Jacoby, J. (1984), "Perspectives on information overload", *Journal of Consumer Research*, Vol. 10 No. 4, pp. 432-435.

James, L.R. and Brett, J.M. (1984), "Mediators, moderators, and tests for mediation", *Journal of Applied Psychology*, Vol. 69 No. 2, pp. 307-321.

James, L.R., Mulaik, S.A. and Brett, J.M. (2006), "A tale of two methods", *Organizational Research Methods*, Vol. 9 No. 2, pp. 233-244.

Jaramillo, F., Mulki, J.P. and Solomon, P. (2006), "The role of ethical climate on salesperson's role stress, job attitudes, turnover intention, and job performance", *Journal of Personal Selling and Sales Management*, Vol. 26 No. 3, pp. 271-282.

Jones, T.M. (1991), "Ethical decision-making by individuals in organizations: an issue- contingent model", *Academy of Management Review*, Vol. 16 No. 2, pp. 366-395.

Kaptein, M. (2008), "Developing and testing a measure for the ethical culture of organizations: the corporate ethical virtues model", *Journal of Organizational Behavior*, Vol. 29 No. 7, pp. 923-947.

Keller, K.L. and Staelin, R. (1987), "Effects of quality and quantity of information on decision effectiveness", *Journal of Consumer Research*, Vol. 14 No. 2, pp. 200-213.

Koh, H.C. and Boo, E.H.Y. (2001), "The link between organizational ethics and job satisfaction: a study of Managers in Singapore", *Journal of Business Ethics*, Vol. 29 No. 4, pp. 309-324.

Koonmee, K., Singhapakdi, A., Virakul, B. and Lee, D. (2010), "Ethics institutionalization, quality of work life, and employee job-related outcomes: a survey of human resource managers in Thailand", *Journal of Business Research*, Vol. 63 No. 1, pp. 20-26.

Lawrence, P.R. and Lorsch, J.W. (1967), "Differentiation and integration in complex organizations", *Administrative Science Quarterly*, Vol. 12, pp. 1-47.

Le Menestrel, M. and Van Wassenhove, L.N. (2004), "Ethics outside, within, or beyond OR models", *European Journal of Operational Research*, Vol. 153 No. 2, pp. 477-484.

Lincoln, J.R. and Kalleberg, A.L. (1985), "Work organization and workforce commitment: a study of plants and employees in the US and Japan", *American Sociological Review*, Vol. 50, pp. 738-760.

March, J.G. and Simon, H.A. (1958), *Organizations*, John Wiley & Sons, New York, NY.

Mathieu, J. and Zajac, D. (1990), "A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment", *Psychological Bulletin*, Vol. 108 No. 2, pp. 171-194.

Miller, S.J., Hickson, D.J. and Wilson, D.C. (1996), "Decision-making in organizations", in Clegg, S.R., Hardy, C. and Nord, W.R. (Eds), *Handbook of Organizational Studies*, Sage Publications, Thousand Oaks, CA, pp. 293-312.

Morita, M. and Flynn, E.J. (1997), "The linkage among management systems, practices and behaviour in successful manufacturing strategy", *International Journal of Operations and Production Management*, Vol. 17 No. 10, pp. 967-993.

Mowday, R.T., Steers, R.M. and Porter, L.W. (1979), "The measurement of organizational commitment", *Journal of Vocational Behavior*, Vol. 14 No. 2, pp. 224-247.

Pentareddy, S. and Suganthi, L. (2015), "Building affective commitment through job characteristics, leadership and empowerment", *Journal of Management & Organization*, Vol. 21 No. 3, pp. 307-320.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.

Premkumar, G., Ramamurthy, K. and Saunders, C.S. (2005), "Information processing view of organizations: an exploratory examination of fit in the context of interorganizational relationships", *Journal of Management Information Systems*, Vol. 22 No. 1, pp. 257-294.

Provost, F. and Fawcett, T. (2013), "Data science and its relationship to big data and data-driven decision making", *Big Data*, Vol. 1 No. 1, pp. 51-59, available at: http://online.liebertpub.com/doi/pdf/10.1089/big.2013.1508

Rest, J.R. (1986), *Moral Development: Advances in Research and Theory*, Praeger, New York, NY.

Rottig, D., Koufteros, X. and Umphress, E. (2011), "Formal infrastructure and ethical decision-making: an empirical investigation and implications for supply management", *Decision Sciences*, Vol. 42 No. 1, pp. 163-204.

Ruiz-Palomino, P. and Martinez-Canas, R. (2014), "Ethical culture, ethical intent, and organizational citizenship behavior: the moderating and mediating role of person–organization fit", *Journal of Business Ethics*, Vol. 120 No. 1, pp. 95-108.

Ruiz-Palomino, P., Martinez-Canas, R. and Fontrodona, J. (2013), "Ethical culture and employee outcomes: the mediating role of person-organization fit", *Journal of Business Ethics*, Vol. 116 No. 1, pp. 173-188.

Schein, E.H. (1996), "Culture: the missing concept in organization studies", *Administrative Science Quarterly*, Vol. 41 No. 2, pp. 229-240.

Schneider, B., Ehrhart, M.G., Mayer, D.M., Saltz, J.L. and Niles-Jolly, K. (2005), "Understanding organization-customer links in service settings", *Academy of Management Journal*, Vol. 48 No. 6, pp. 1017-1032.

Schriesheim, J.F., Von Glinow, M.A. and Schriesheim, C.A. (1979), "The impact of job design variables on affective, motivational, and behavioral variables in a public sector organization", *Academy of Management Proceedings (00650668)*, pp. 353-356.

Schwepker, C.H. (1999), "Research note: the relationship between ethical conflict, organizational commitment and turnover intentions in the salesforce", *Journal of Personal Selling & Sales Management*, Vol. 19 No. 1, pp. 43-49.

Schwepker, C.H. Jr (2001), "Ethical climate's relationship to job satisfaction, organizational commitment, and turnover intention in the salesforce", *Journal of Business Research*, Vol. 54 No. 1, pp. 39-52.

Schwepker, C.H., Ferrell, O.C. and Ingram, T.N. (1997), "The influence of ethical climate and ethical conflict on role stress in the sales force", *Journal of the Academy of Marketing Science*, Vol. 25 No. 2, pp. 99-108.

Simon, H.A. (1960), *The New Science of Management Decision*, Harper & Row, New York, NY.

Sims, R.R. (1991), "The institutionalization of organizational ethics", *Journal of Business Ethics*, Vol. 10 No. 7, pp. 493-506.

Singer, A.E. and Singer, M.S. (1997), "Management-science and business-ethics", *Journal of Business Ethics*, Vol. 16 No. 4, pp. 385-395.

Singhapakdi, A. and Vitell, S. (2007), "Institutionalization of ethics and its consequences: a survey of marketing professionals", *Journal of the Academy of Marketing Science*, Vol. 35 No. 2, pp. 284-294.

Sutherland, E.H. and Cressey, D.R. (1970), *Principles of Criminology*, 8th ed., Lippincott, Philadelphia, PA.

Tang, C.S. and Zimmerman, J. (2013), "Information and communication technology for managing supply chain risks", *Communications of the ACM*, Vol. 56 No. 7, pp. 27-29.

Trevino, K.T. (1986), "Ethical decision making in organizations: a person-situation interaction model", *Academy of Management Review*, Vol. 11 No. 3, pp. 601-617.

ER

Trevino, L.K. and Nelson, K.A. (2011), *Managing Business Ethics: Straight Talk about How to Do it Right*, 5th ed., John Wiley & Sons, Hoboken, NJ.

Trevino, L.K., Butterfield, K.D. and McCabe, D.L. (1998), "The ethical context in organizations: Influences on employee attitudes and behaviors", *Business Ethics Quarterly*, Vol. 8 No. 3, pp. 447-476.

Tushman, M.L. and Nadler, D.A. (1978), "Information processing as an integrating concept in organizational design", *Academy of Management Review*, Vol. 3 No. 3, pp. 613-624.

Valentine, S. and Hollingworth, D. (2012), "Moral intensity, issue importance, and ethical reasoning in operations situations", *Journal of Business Ethics*, Vol. 108 No. 4, pp. 509-523.

Valentine, S. and Hollingworth, D. (2015), "Communication of organizational strategy and coordinated decision making as catalysts for enhanced perceptions of corporate ethical values in a financial services company", *Employee Responsibilities and Rights Journal*, Vol. 27 No. 3, pp. 213-229.

Valentine, S., Godkin, L. and Lucero, M. (2002), "Ethical context, organizational commitment, and person-organization fit", *Journal of Business Ethics*, Vol. 41 No. 4, pp. 349-360.

Valentine, S., Hollingworth, D. and Eidsness, B. (2014), "Ethics-based selection and reduced ethical conflict as drivers of positive work attitudes: delivering on employees' expectations for an ethical workplace", *Personnel Review*, Vol. 43 No. 5, pp. 692-716.

Valentine, S., Hollingworth, D. and Francis, C. (2013), "Quality-related HR practices, organizational ethics, and positive work attitudes: Implications for HRD", *Human Resource Development Quarterly*, Vol. 24 No. 4, pp. 493-523.

Visweswaran, C. and Deshpande, S.P. (1996), "Ethics, success, and job satisfaction: a test of dissonance theory in India", *Journal of Business Ethics*, Vol. 15 No. 10, pp. 1065-1069.

Visweswaran, C., Deshpande, S.P. and Joseph, J. (1998), "Job satisfaction as a function of top management support for ethical behavior: a study of Indian managers", *Journal of Business Ethics*, Vol. 17 No. 4, pp. 365-371.

Williamson, O.E. (1991), "Comparative economic organization: the analysis of discrete structural alternatives", *Administrative Science Quarterly*, Vol. 36, pp. 269-296.

About the authors

Sean Robert Valentine (DBA, Louisiana Tech University) is Professor of Management and the Robert Page Endowed Professor of Leadership and Ethics in the Department of Management (College of Business and Public Administration) at the University of North Dakota. His research and teaching interests include business ethics, human resource management and organizational behavior. His research has appeared in journals such as *Human Resource Management*, *Journal of Business Ethics* and *Human Relations*. Sean Robert Valentine is the corresponding author and can be contacted at: sean.valentine@mail.business.und.edu

David Hollingworth (PhD, University of Minnesota) is Professor of Operations Management in the Department of Management (College of Business and Public Administration) at the University of North Dakota. His research and teaching interests include operations management, supply chain management and business ethics. His research has appeared in journals such as *Industrial and Corporate Change*, *Journal of Operations Management* and *California Journal of Operations Management*.

Patrick Schultz (PhD, Texas Tech University) is Professor of Management in the Department of Management (College of Business and Public Administration) at the University of North Dakota. His research and teaching interests include organizational theory, business strategy and business ethics. His research has been published in *Leadership Quarterly* and multiple academic case journals.