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Ethical Decision Making in Organizations: The Role of Leadership Stress

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ABSTRACT. Across two studies the hypotheses were tested that stressful situations affect both leadership ethical acting and leaders' recognition of ethical dilemmas. In the studies, decision makers recruited from 3 sites of a Swedish multinational civil engineering company provided personal data on stressful situations, made ethical decisions, and answered to stress-outcome questions. Stressful situations were observed to have a greater impact on ethical acting than on the recognition of ethical dilemmas. This was particularly true for situations involving punishment and lack of rewards. The results are important for the Corporate Social Responsibility (CSR) of an organization, especially with regard to the analysis of the stressors influencing managerial work and its implications for ethical behavior.

KEY WORDS: ethical decision making, organizational stress, moral values, time management, crisis management

It has become imperative to modern organizations to be able to recognize and deal with complex business ethics. The reason for this can be traced to several well-documented scandals, where leaders' unethical behavior has shown to have had grave consequences for the organizations and their surroundings (Gillespie and Dietz, 2009; Greengard, 1997; Whitener et al., 1998). These scandals have been well published in the media resulting in public outrage about deception and fraud. Consequences have involved law suits, loss of trust, and credibility among employees, customers, clients, and the general public. Well-known cases include: 1. The Monsanto attempts to deal with critical issues in connection with the marketing of genetically modified crops, 2. the questionable accounting practices at Enron and Arthur Anderson, 3. the lack of accountability at American International Group (AIG) in connection with the subprime mortgage collapse, and 4. The Coca-Cola Company struggles with ethical crises (Ferrell et al., 2008; Toffler and Reingold, 2004). As a result of these scandals, the public has demanded improved business ethics and greater corporate responsibility.

Ethical decision making deals with moral issues: A moral issue is present where ever individual actions, when freely performed, may harm or benefit others (Jones, 1991, p. 367). Thus, the action or decision must have consequences for other people and involve choice on the part of the decision maker. A moral agent is the person who makes a moral decision (Jones, 1991). The status as a moral agent is defined by choices and their consequences for other people, but does not presuppose that a moral agent recognizes that moral issues are at stake. This is important to the model as the extent to which moral agents recognize moral issues constitute an outcome that the model seeks to explain (Jones, 1991).

An ethical decision is defined as "a decision that is both legal and morally acceptable to the larger community" whereas an unethical decision may be regarded as "either illegal or morally unacceptable to the larger community" (Jones, 1991, p. 367). This is consistent with Trevino et al. (2006) who see behavioral ethics as referring to "individual behavior that is subject to or judged according to generally accepted moral norms of behavior" (p. 952). Our focus thus lies on explaining individual behavior (ethical decision making) in the context of larger social prescriptions (Trevino et al., 2006, p. 952). In this article we use the terms ethical and unethical decisions as well as acts referring to the actual behavior which, like decisions, can be legal or illegal and more or less acceptable to the larger community.

Given the detrimental consequences of unsound ethical decisions, understanding how leaders make ethical decisions and the factors that influence ethical decision making and ethical decisions become

critical. Empirical studies of ethical decision making have looked at the effects of individual and organizational variables on ethical decision making including factors like education, job satisfaction, and work experience (Ford and Richardson, 1994; Loe et al., 2000; O'Fallon and Butterfield, 2005). Yet, such studies tend to include fairly general measures and theoretical mechanisms (O'Fallon and Butterfield, 2005). Beginning with Jones (1991) other studies have looked at the effects of moral issue characteristics (moral intensity) on ethical decision making (Selart, 1996). Several studies have looked at the effects of individual and organizational variables at different stages in ethical decision processes including awareness, ethical judgment, intent, and behavior. Yet, whereas a predominant share of these studies have concerned themselves with the effects on ethical judgment, only a small proportion have related themselves to the effects on awareness (Loe et al., 2000).

Research on the effects of stress on ethical decision making in organizations remains sparse. This absence is puzzling for several reasons: First, the literature on occupational stress and its effects on cognitive functioning, perception, and problem solving is well developed (Chajut and Algom, 2003; Cooper et al., 2001; Lazarus, 1993) and applicable to ethical decision making. Second, stress and ethical dilemmas tend to coexist in organizations as stressful situations are also likely to present leaders with ethical dilemmas (Mohr and Wolfram, 2010). Cost-reductions programs and reorganizations, for instance, make substantial demands on leaders' attention and work-capacity. Thus, they often require extensive negotiations and are rife with moral issues such as who will need to go or how much can or should we help employees affected by cost-savings. Managers often receive new instructions before having finished a previous task and may face shifting goals and priorities before completing an assignment (Mohr and Wolfram, 2010). Empirical studies show how managers' tend to have busy, demanding, and stressful work schedules (Ganster, 2005; Hambrick et al., 2005). Managers frequently find themselves pressed on time while facing conflicting role demands from multiple constituencies (Pfeffer and Salancik, 1975).

Empirical findings suggest that stress does influence ethical decision making: According to an American study,[1] almost half of all workers (48%) reported that they responded to job pressure by performing unethical or illegal activities and 58% of the respondents admitted that workplace pressures had caused them to at least consider acting unethically or illegally on the job (McShulskis, 1997). Stress has been found to make decision makers cut corners on quality control, cover up incidents at work, abuse/lie about sickness days, and deceive customers (Boyd, 1997). In another study Hinkeldey and Spokane (1985) found a negative effect of pressure on counselors' ethical decisions in legal and ethical conflict situations.

Understanding how stress influences ethical decision making thus becomes important if we seek to improve ethical decision making and ethical decisions. In order to intervene and reduce possible negative effects of stress on ethical decision making we need, however, to go beyond the notion of a general effect of stress and instead explore how and when or at which stage stress influences the ethical decision process. Depending on how stress influences ethical decision making (impairs attention or reduce prosocial attitudes) different interventions may be more or less effective. If negative effects of stress stems from its effects on leaders ability to recognize ethical dilemmas, collectively raising awareness or reminding leaders about moral issues may alleviate negative effects of stress. If, on the other hand the effect is on a leader's willingness to prioritize moral concerns and others interests over self-interest, merely reminding leaders about the existence of moral dilemmas may have little or no effect and other measures may be called for (Selart, 2010).

In this article we look at the effects of stress at two separate stages in the ethical decision process (Jones, 1991; Rest, 1986), that is, on the recognition of ethical dilemmas and on ethical actions. In this connection we also present Jones model of ethical decision making (Jones, 1991). We introduce the concepts of stress and stressors and develop two hypotheses, describing the different mechanisms by which stress is believed to influence the recognition of ethical dilemmas (Hypothesis 1) and ethical acts (Hypothesis 2). We then describe and report the findings from two experiments, each of which tests one of the two hypotheses. Finally we summarize the findings and discuss them as well as no-findings in the concluding discussion.

Stress and ethical decision making: a model

In this article we build on Jones' model of ethical decision making (Jones, 1991) which extends on Rest's four-stage model of ethical decision making (1986). In both models ethical decision making is viewed as a sequential process incorporating a series of components or stages. Thus, for a decision maker to act ethically he or she must (a) recognize a moral issue, (b) make a moral judgment, (c) give priority to moral concerns and establish a moral intent, and finally (d) act on the moral concerns. The four components are conceptually distinct and each stage or component constitutes a required but not sufficient precondition for the subsequent stage. Thus, recognizing a moral issue is a necessary but sufficient condition for making a moral judgment, which in turn is a necessary but not sufficient precondition for giving priority to moral concerns or acting on those concerns (Jones, 1991; Rest, 1986).

Jones adds issue characteristics to Rest's original model: How people respond to moral issues is systematically related to the moral intensity of a moral issue, he argues. Moral intensity here captures the extent of issue-related moral imperative in a situation (Jones, 1991, p. 372). It is a multidimensional construct with component parts that are characteristics of the moral issue. Such characteristics include the magnitude of consequences, social consensus, the probability of effects, temporal immediacy, proximity, and concentration of effects. High levels on each of these dimensions are associated with high moral intensity. Moral intensity moderates the relationship between the various factors or stages. Thus, issues of high moral intensity are more likely to be recognized as a moral issue, will elicit more sophisticated moral reasoning, and more likely will cause a moral agent to establish a moral intent as well as engage in ethical acts. Subsequent studies support the main elements in Jones' model (Chia and Lim, 2000; Tsalikis et al., 2008).

In Jones' model, organizational or external factors consist of everything beyond the moral issue and the ethical decision making process itself. Negative stress here constitutes one of several external factors. Other external factors include *the values of the organization and its managers* (Soutar et al., 1994), *personality* (Rayburn and Rayburn, 1996), *gender* (Weeks et al., 1999), *career stage* (Weeks et al., 1999), and *geocultural differences* (McDonald, 2000).

Based on Jones model, this study seeks to develop an extended model of how stress impacts on the ethical decision-making process. While moral intensity is likely to vary between moral issues, our interest lies in how stress influences the recognition of moral issues and moral actions independently of their moral intensity.

Stress can be defined as "a sequence of events that includes the presence of a demand, the perception that the demand is significant and taxing on an individual's resources, and the generation of a response that typically affects the individual's well-being" (Ellis, 2006, p. 576). Stress is a relational concept in that it constitutes the relationship between a set of external stressors and the individual's ability to cope with these stressors that determine the psychological and physiological effects (Lazarus, 1993). Stress arises "…when the demands of a particular encounter are appraised by the individual as about to tax or exceed the resources available, thereby threatening well-being and necessitating a change in the individual functioning to 'manage' the encounter" (Cooper et al., 2001; Lazarus, 1993). Stress is influenced by a set of stressors or producing environmental circumstances, events, and conditions (Beehr and McGrath, 1992). Important stressors in organizations include powerlessness, work overload, a lack of feedback and punishment.

The focus of this study is on two different stages in Jones' ethical decision-model, that is, on the recognition of moral issues and on moral behavior. The recognition of moral issues constitutes a necessary but not sufficient precondition for moral behavior. The effects of stress on each of these stages will likely stem from different and distinct theoretical mechanisms. Owing to this we deliberately draw on different theories and literatures to develop the rationale for each of the two hypotheses. Thus, effects on recognition, we posit, can be attributed to the effects of stress on selective attention (Chajut and Algom, 2003) whereas effects on moral behavior can be attributed to the effect of stress on pro-social behavior.

A series of empirical studies shows how stress depletes peoples' attentional resources (Callaway and Dembo, 1958; Chajut and Algom, 2003; Lazarus et al., 1952; Postman and Bruner, 1948). Scarce

resources are committed to the processing of task-relevant dimensions. Stress progressively reduces the range of cues utilized in a task (Easterbrook, 1959; Wells and Matthews, 1994). This deficit of attentional resources renders the processing of task-relevant dimensions intrusion-free as people have little resources left to process task irrelevant dimensions. In what has been referred to as the attention view on selectivity under stress, a division is drawn between attributes that need attention and responding and those that do not. This so-called narrowing effect is found to be consistent across different stressors (Wells and Matthews, 1994) and has been generalized to a range of different cognitive tasks causing premature closing in decision making (Keinan, 1987) and increased stereotyping (Keinan et al., 2000). Several studies also suggest that stress impairs memory-retrieval, including social memory, due to a stress-induced increase in cortisol production (Buchanan and Tranel, 2008; Merz et al., 2010). Moral issues tend to be complex, unstructured, novel, and peripheral to more immediate concerns, and hence vulnerable to the narrowing of attention that follows with stress (Rest, 1979).

H1: Stressful situations leading to negative stress levels among the decision makers will lead to less frequent recognition of ethical dilemmas (moral issues).

Stress is also likely to influence peoples' moral actions. It may influence peoples' pro-social orientation along two different routes: First, stress may cause people to adopt a more antagonistic stance: Human responses to stress have typically been described as one of fight or flight (Cannon, 1932; Taylor et al., 2000). The fight or flight response describes a primary, integrated physiological response to stress that involves the sympathetic nervous system. People are believed to fight a foe when standing a chance to win or otherwise flight. The fight-or-flight response, however, refers to responses to a whole range of stressors other than a potential enemy (Cooper, 2000). The dominant stress response then comes in the form of aggression which is likely to reduce peoples' pro-social orientation and we suggest reduce peoples' proclivity to engage in ethical behavior (Depret and Fiske, 1999; Taylor et al., 2000).

The second route starts with the premise that ethical actions demand effort, energy, and self-regulation (DeWall et al., 2008). Helping other people requires people to muster thought and actions that would otherwise not be needed. A series of studies suggest that peoples' capacity for self-regulation is a finite resource and that prolonged self-regulation depletes this resource (Muraven and Baumeister, 2000; Schmeichel and Baumeister, 2004). Prolonged self-regulation that taxes peoples' regulatory capacity thus is likely to reduce it and hence also their ethical actions. Several studies support this relationship: Gailliot et al. (2006) found that participants exerting self-control in an experimental task were less willing to forego self-interest by donating food or money to people in need or volunteering for unpaid work, compared to participants who had not exerted self-control. In another experiment participants who completed a difficult listening task (requiring extensive self-regulation) were less helpful with another experiment than participants who completed an easy listening task (requiring less self-regulation) (Sherrod and Downs, 1974). Stress is here likely to tax peoples' capacity for self-regulation and hence, in line with the reasoning, should also reduce peoples' ability to muster the extra effort needed to act ethically. Note the differences between these mechanisms or routes: The fight or flight response suggests an antagonistic response to stress. People respond to stress with hostility, adopting a competitive stance toward other people. The second mechanism does not suggest an antagonistic response but suggests that ethical actions require effort and self-regulation and that stress is likely to reduce peoples' capacity for self-regulation, hence reducing the likelihood that people will put up the extra effort and willpower needed to act ethically. People do not so much adopt an antagonistic stance toward other people, as refrain from making the extra effort needed to act ethically or abstain from acting unethically.

H2: Stressful situations leading to negative stress levels among the decision makers will lead to more frequent unethical (immoral) acting.

In the next section of this article we proceed to test these hypotheses. Hypothesis 1 is tested in Study 1 whereas Hypothesis 2 is tested in Study 2.

Study 1

Method

Participants

The participants consisted of decision makers recruited from three different sites of a large multinational Swedish civil engineer company. All the participants acted as project leaders. Some of the participants worked with direct building-related projects whereas others worked with building-related services related to information technology-based projects. The participants mostly had an engineering background.

A survey was distributed among the participants. Fifty percent of the decision makers on each site were distributed randomly to the study. All decision makers invited were able to participate in the study. Altogether 38 participants took part in this study. A survey was distributed among the participants. Taken together, 50% of the decision makers on each site were distributed randomly to Study 1. All invited decision makers were able to participate in the study. All in all, nine women and 27 men participated in Study 1. Two participants did not indicate their gender belonging. Table I shows some demographic data from Study 1.

Instrument and material

The data were collected through the use of surveys. The survey consisted of four parts, measuring the recognition of ethical issues, perceived negative stressful situations, stress outcomes, and some demographic data.

Measures of recognized ethical issues

This part of the survey consisted of 11 ethical dilemmas. The ethical dilemmas were created on the basis of the ethical guidelines which were supposed to be salient to the company. The participant was informed that he or she had acted unethical in the ethical dilemmas. This change was made in an attempt to measure the degree to which the participants recognize the ethical dilemmas in the situation, that is, in the early part of the ethical decision making process. The participant was then asked to what degree he or she thought the act was justifiable. This part of the survey measured the decision maker's recognition of an ethical dilemma. One example of an ethical dilemma with response rate in the survey was the following:

> You are responsible for a project and it is supposed to be finished in two days. Without the time consuming quality control you would just manage to make the deadline, but if you do all the paperwork with the accuracy demanded, you will be delayed. You skip parts of the quality control to be able to deliver the product in time. Is your act justifiable?

Never	Seldom	Some times	Often	Always
1	2	3	4	5

The mean value of the sample on part A in Study 1 was 1.23 (SD = 0.48) and the Cronbach's α based on the classical approach (S) was 0.66. Since the sample was small, more robust measures were taken into account as suggested by Christmann and Van Aelst (2006). Thus, the Cronbach's α based on Tukey's S-estimator (S_{bw}) was 0.71. When the α was

TABLE I

Descriptive statistics for Study 1

Gender	Distribution[a] (%)	Age group[a]					Education[a]		
		20–30 (%)	31–40 (%)	41–50 (%)	51–60 (%)	61– (%)	University (%)	High school (%)	Elementary school (%)
Male	68.4	15.8	15.8	15.8	21.0	0	26.3	42.1	0
Female	23.7	15.8	5.3	0	2.6	0	18.4	5.3	0
Total	92.1	31.6	21.1	15.8	23.6	0	44.7	47.4	0

[a]The remaining 7.9% consists of missing values.

based on the reweighted minimum covariance determinant (RMCD) it was 0.77. Finally, when the α was based on the M-estimator T3 (T3) it was 0.74.

Measures of perceived negative stressful situations

This part of the survey consisted of 36 standard questions on work-related situations (Potter, 1998). The work-related situations were divided into 12 segments: Powerlessness, No Information, Conflict, Poor Team Work, Overload, Boredom, Poor Feedback, Punishment, Alienation, Ambiguity, Unrewarding, and Values Conflict, with three items on each segment. In Potter's original survey there were four items per segment. This part of the survey was supposed to measure in what degree participants experienced stressful situations in their work environment. Thus, each of the situational questions was followed by a question on positive or negative feeling of stress by the participants, originated by the present situation just considered. Only when the participants responded with a feeling of negative stress (1 or 2) in the present situation, the points from the situational question was added to the total negative situational stress score. An example of a question with the belonging response rates in this part was:

I get blamed for others' mistakes

Never	Seldom	Some times	Often	Always
1	2	3	4	5

This question was followed by the question of perceived stress by the present situation:

How do you experience the current situation you just described from a stress point of view?

☹Negative	Somewhat Negative	Neutral	Somewhat Positive	☺Positive
1	2	3	4	5

Reliability analyses were made, and the Cronbach's α based on the classical approach was 0.58. Since the sample was small, more robust measures were taken into account as suggested by Christmann and Van Aelst (2006). Thus the Cronbach's α based on Tukey's S-estimator (S_{bw}) was 0.63. When the α was based on the RMCD it was 0.67. Finally, when the α was based on the M-estimator T3 (T3) it was 0.66.

Measures of stress outcomes

This part of the survey consisted of eight questions related to stress outcomes. Five of the questions addressed physical outcomes, such as heart problems and muscle tension. Three of the questions addressed psychological outcomes, such as restlessness and problem sleeping. A rating scale from 1 to 5 was used. An example of a question with the belonging response rates on the current part was:

I feel tired and exhausted

Never	Seldom	Some times	Often	Always
1	2	3	4	5

This part of the survey was used to control if a high level of situations leading to negative stress in the work environment leads to stress outcomes. The mean value of the sample on the part in Study 1 was 1.30 (SD = 0.66), and the Cronbach's α based on the classical approach was 0.81. Since the sample was small, more robust measures were taken into account as suggested by Christmann and Van Aelst (2006). Thus, the Cronbach's α based on Tukey's S-estimator (S_{bw}) was 0.83. When the α was based on the RMCD it was 0.89. Finally, when the α was based on the M-estimator T3 (T3) it was 0.84.

Procedure

The HR managers of the three departments were contacted in order to present the idea behind the study. They all approved to the proposed study. The surveys were distributed in Stockholm, Malmö, and Helsingborg on three different days. All data were collected close to the distribution. Participants at all sites were treated in the same manner. The company and all the project leaders were of great help in conducting the study.

Results

Stressful situations leading to less recognition of moral issues (Hypothesis 1)

A correlation with recognition of moral issues was calculated both separately for the 11 sets of situations

TABLE II

Correlations and multiple regression with recognition of moral issues for the situations leading to negative stress ($N = 38$)

Section	Mean[a]	SD	Pearson correlation – recognition MI	Multiple regression (beta) – recognition MI
Powerlessness (α = 0.48)	0.50	0.64	0.205★	−0.015
No information (α = 0.53)	0.62	0.70	0.289★★	0.087
Conflict (α = 0.46)	1.04	0.98	−0.038	0.030
Poor team work (α = 0.47)	0.92	0.90	0.055	−0.021
Overload (α = 0.84)	1.44	1.17	−0.192	−0.363
Boredom (α = 0.75)	0.72	0.98	0.135	0.150
Poor feedback (α = 0.70)	0.88	0.96	0.336★★	0.461★
Punishment (α = 0.59)	0.62	0.92	0.121	0.137
Ambiguity (α = 0.64)	1.14	0.91	−0.031	−0.119
Unrewarding (α = 0.60)	0.51	0.75	0.215★	0.087
Values conflict (α = 0.51)	0.37	0.56	0.015	−0.213
Total	0.80	0.54	0.139	–

[a]High value equals a high frequency of stressful situations.
★$p < 0.1$; ★★$p < 0.05$; ★★★$p < 0.01$.

leading to negative stress, as well as for the full profile of the 11 sets. A first-order multiple regression model with recognition of moral issues as the dependent variable was analyzed to determine the effect of the set of the 11 independent stressful situational variables. To reduce the error variance, three variables, organizational site, sex, and age, were incorporated into the regression model as control variables. The relative importance of each independent variable was measured by the statistical significance of the standardized Beta coefficients. The results from the multiple regression analyzes are shown in Table II. The R^2 was 0.300 and the adjusted R^2 was 0.004. Before we could accept these regression results as valid, we examined the degree of multicollinearity and its effects on the results. To do so, we employed a two-part process (condition indices and the decomposition of the coefficient variance) and made comparisons with the conclusions from the variance inflation factor (VIF) and tolerance values.

Discussion

The first hypothesis of this study suggested that situations perceived as stressful would impair leaders' ability to recognize ethical dilemmas. Considered as an overall factor, there was a positive non-significant correlation between perceived stressful situations and the recognition of unethical dilemmas. No conclusions except that there is no significant correlation can be drawn from this result.

Looking at the stressful situation variables separately, there were some significant correlations although the regression analysis did not yield any reliable findings. Feedback from a superior can be seen as a type of reward for the work a person has accomplished (McCall and Kaplan, 1990). It seems reasonable to assume that a lack of feedback on accomplishments would make people disappointed and believing in their right to compensate themselves in other and sometimes unethical ways. Therefore, they would not look at these situations as unethical, considering their current situation. This reasoning was supported both by the correlation analysis but not by the regression analysis. The finding suggests a connection between perceived lack of feedback and the recognition of unethical dilemmas.

An experienced lack of information made people recognize unethical dilemmas less frequently. The ethical dilemmas in this study were developed from the ethical standards that were supposed to be salient to the company. One possible explanation for the result could be that the decision makers lacking

information had not perceived the information of the ethical standards, and were not trained to recognize them (Kotter, 1982; Mintzberg, 1983). This reasoning was supported by the correlation analysis, but not by the multiple regression analysis.

An experienced powerlessness made the decision makers recognize ethical dilemmas less frequent, as did lack of rewards. These two results were weak. Lack of rewards can be explained to lead to less frequent recognition of ethical dilemmas in the same way as for poor feedback. People sometimes decide to reward themselves in an unethical way. Powerlessness can be explained as a form of lack of control over the work situation (Bacharach et al., 1995; Ferris and Kacmar, 1992). Feeling a lack of control over their work situation might make decision makers feel abandoned by the company and further thinking that, "if the company abandons me it is all right to abandon the company." Thus, they do not recognize dilemmas as unethical, since they feel they have the *right* to act back.

No significant support was obtained for the other stressful situational variables in Study 1.

Study 2

Method

Participants

The participants consisted of decision makers recruited from the same three different sites of a large multinational Swedish civil engineer company as in Study 1. As in the former study, all the participants acted as project leaders. Another similarity was that some of the participants worked with direct building-related projects whereas others worked with building-related services related to information technology-based projects. The participants mostly had an engineering background.

A survey was distributed among the participants. Fifty percent of the decision makers on each site were distributed randomly to the study. All decision makers invited were able to participate in the study. Forty surveys were distributed and 39 were used in the study of which 10 derived from women and 29 from men. Table III shows some demographic data from Study 2.

Instrument and material

The data were collected through the use of surveys. The survey consisted of four parts, measuring ethical acting, perceived negative stressful situations, stress outcomes, and some demographic data. Study 2 was conducted exactly in the same way as Study 1. The only difference was the first part of the survey concerning ethical dilemmas.

Measures of ethical acting

This part of the survey consisted of 11 ethical dilemmas. These were constructed in a way that they had a relation to the ethical guidelines of the company participating in the study. The decision maker was asked in what degree he or she would actually act unethical when confronted with the ethical dilemmas. This part of the survey measured the ethical acting of the respondents. One example of an ethical dilemma and its response scale in the survey is presented below:

> You are responsible for a project and it is supposed to be finished in two days. Without the time consuming

TABLE III

Descriptive statistics for Study 2

Gender	Distribution (%)	Age group[a]					Education[b]		
		20–30 (%)	31–40 (%)	41–50 (%)	51–60 (%)	61– (%)	University (%)	High school (%)	Elementary school (%)
Male	74.4	15.4	25.6	15.4	15.4	0	41.0	30.8	0
Female	25.6	10.3	5.1	10.3	0	0	25.6	0	0
Total	100	25.7	30.7	25.7	15.4	0	66.6	30.8	0

[a]The remaining 2.5% consists of missing values.
[b]The remaining 2.6% consists of missing values.

quality control you would just manage to make the deadline, but if you do all the paperwork with the accuracy demanded, you will be delayed. Would you consider not doing parts of the quality control to be able to deliver the product in time?

Never	Seldom	Some times	Often	Always
1	2	3	4	5

The mean value with the sample on this part in Study 1 was 1.24 (SD = 0.43), and the Cronbach's α based on the classical approach was 0.57. Since the sample was small, more robust measures were taken into account as suggested by Christmann and Van Aelst (2006). Thus, the Cronbach's α based on Tukey's S-estimator (S_{bw}) was 0.60. When the α was based on the RMCD it was 0.71. Finally, when the α was based on the M-estimator T3 (T3) it was 0.67.

Measures of perceived negative stressful situations

This part of the survey consisted of exactly the same 36 standard questions on work-related situations (Potter, 1998) as the same part of the survey in Study 1.

Reliability analyses were made, and the Cronbach's α based on the classical approach was 0.56. Since the sample was small, more robust measures were taken into account as suggested by Christmann and Van Aelst (2006). Thus, the Cronbach's α based on Tukey's S-estimator (S_{bw}) was 0.60. When the α was based on the RMCD it was 0.66. Finally, when the α was based on the M-estimator T3 (T3) it was 0.61.

Measures of stress outcomes

This part of the survey consisted of exactly the same 8 questions related to stress outcomes as was used in part C of the survey in Study 1. The mean value from the sample on part C in Study 2 was 1.27 (SD = 0.52), and the Cronbach's α based on the classical approach was 0.68. Since the sample was small, more robust measures were taken into account as suggested by Christmann and Van Aelst (2006). Thus, the Cronbach's α based on Tukey's S-estimator (S_{bw}) was 0.70. When the α was based on the RMCD it was 0.80. Finally, when the α was based on the M-estimator T3 (T3) it was 0.77.

Procedure

The procedure of Study 2 was exactly the same as in Study 1.

Results

Stressful situations leading to unethical acting (Hypothesis 2)

Correlation with ethical acting was performed both separately for the remaining 10 sets of situations leading to negative stress, as well as for the full profile of the 10 sets. The result of this analysis is shown in Table IV.

A first-order multiple regression model with unethical acting as the dependent variable was analyzed to determine the effect of the set of the 10 independent stressful situational variables. To reduce the error variance, three variables, organizational site, sex, and age, were incorporated into the regression model as control variables. The relative importance of each independent variable was measured by the statistical significance of the standardized Beta coefficients. The results from the multiple regression analyses are shown in Table IV. The R^2 was 0.368 and the adjusted R^2 was 0.124. Before we could accept these regression results as valid, we examined the degree of multicollinearity and its effects on the results. To do so, we employed a two-part process (condition indices and the decomposition of the coefficient variance) and made comparisons with the conclusions from the VIF and tolerance values.

Discussion

The second hypothesis of this study suggested that perceived stressful situations would lead to more frequent unethical acting. The following discussion will focus on the results of Study 2 considering this hypothesis.

On the whole, perceived stressful situations lead the decision makers to act more unethical. As shown in Table IV, this result was only marginal. However, when looking at the stressful situation variables separately there were some significant results. It may be observed that a lack of reward leads decision makers to sometimes compensate themselves in an unethical way. This reasoning is supported both by the correlation analysis and by the multiple regression model, suggesting a causality between negatively perceived unrewarding situations in the organization, and unethical acting.

TABLE IV

Correlations and multiple regression with unethical acting for the situations leading to negative stress ($N = 38$)

Section	Mean[a]	SD	Pearson correlations – unethical acting	Multiple regression (beta) – unethical acting
Powerlessness ($\alpha = 0.49$)	0.77	0.98	−0.025	−0.040
No information ($\alpha = 0.64$)	0.85	0.91	0.036	−0.004
Poor team work ($\alpha = 0.56$)	0.67	0.64	0.282**	0.129
Overload ($\alpha = 0.69$)	1.85	0.94	−0.013	−0.183
Boredom ($\alpha = 0.59$)	0.59	0.70	0.128	0.016
Poor feedback ($\alpha = 0.48$)	0.63	0.74	−0.053	−0.109
Punishment ($\alpha = 0.57$)	0.47	0.87	−0.164	−0.612***
Alienation ($\alpha = 0.57$)	0.30	0.70	0.197	0.132
Ambiguity ($\alpha = 0.49$)	0.70	0.95	−0.122	−0.351*
Unrewarding ($\alpha = 0.51$)	0.58	0.88	0.239*	0.631**
Total	0.75	0.42	0.327*	–

[a]High value equals a high frequency of stressful situations.
*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

It also seems reasonable that frustration over poor teamwork would lead decision makers to act unethically toward other decision makers, both clients and the employer. If you are not satisfied with the team you work in, the mental resistance for acting unethical might be reduced. The bond and the loyalty with the team might hence be weaker. This reasoning was supported by the correlation analysis, but not by the multiple regression model. Future studies might clarify if there really is such a connection to be found.

One of the stressful situations leads to less frequent unethical acting. This result is in the opposite direction than hypothesized, and it must be taken seriously. One possible explanation might be that instead of being frustrated and angry over punishment, decision makers are frustrated and scared. The fear of being punished might make decision makers less prone to act unethical. The result might also be explained in terms of that decision makers, due to punishment, are scared to admit that they sometimes act unethical. Either way this result earns to be taken with great seriousness, since punishment from the company could be considered as an unethical act in itself.

A marginally significant result was found, suggesting that ambiguity would lead to less unethical behavior. This result was only found in the multiple regression analysis, and it is not strong. No significant support was obtained for the other stressful situational variables in Study 1.

General discussion

Across two studies, the hypotheses were tested that stressful situations affect both the recognition of ethical dilemmas and the ethical acting. The two experiments tested the effects on stress at the two extreme stages of the ethical decision process model described by Jones (1991). Together they provide insight into how stress influences ethical decision making. The findings indicate that while stress has little influence on peoples' recognition of moral issues, it shows a negative effect on the establishment of a moral intent.

In 1985 Hinkeldey and Spokane found that ethical decision-making was negatively affected by pressure. Furthermore, according to an American study from 1997, titled "Sources and Consequences of Workplace Pressure," conducted by The American Society of Chartered Life Underwriters (CLU), The Chartered Financial Consultants (ChFC), and The Ethics Officer Association, almost half of the respondents performed unethical and illegal activities due to job pressure. This association between stress

and unethical behavior was confirmed by Berman (1998). These findings gave rise to the first and the second hypothesis of this study. Our mission has hence been to investigate the association between more detailed stressful situations and the two extreme phases of the ethical decision-making process (Rest, 1986).

However, there is also research indicating a clear link between leaders' stress tolerance and their ability to operate effectively (Bass, 1990; Howard and Bray, 1988). With the help of high stress tolerance, leaders are capable to adapt to the hectic environments, long hours, and constant demands of the organization. When bad decisions are made, it is usual for leaders to put the blame on stress. However, this is often a too simple explanation. There is research showing that stress does not necessarily lead to poorer management decisions (Klein, 1996). Some leaders must be able to work under constant stress in their professional capacity, such as fire officers, chief surgeons, chief pilots, etc. There have also been studies of masters of chess. These show that even under extreme time pressure, the ability to maintain a style of play on a master level does not change. The quality of the chess masters' decisions is not affected. It is, therefore, difficult to conclude that stress must lead to worse decisions (Klein, 1998).

Nevertheless, it is not difficult to understand that stressors have an effect on leaders' decisions. It has been shown that stress has an impact on how we make decisions. For instance, time pressure easily leads to a limited focus and to cognitive biases (Svenson and Maule, 1993). It also makes leaders have less access to external information sources (Christensen and Kohls, 2003). Still, stress does not lead to poor decisions based on the information we have on hand. It can be safely said that stress reduces our ability to gather information and that it impairs our ability to analyze using the working memory. In addition, stress makes it harder for us to concentrate on a current task.

Hypotheses

Hypothesis 1 advocated that stressful situations in the workplace would impair leaders' ability to recognize ethical dilemmas. It was not hypothesized what kind of stressful situations would lead to less recognition of unethical dilemmas, just that there would be such a connection. This hypothesis tested an early phase of the ethical decision-making process. While this study shows no general effect of stress on the recognition of ethical dilemmas this absence of a finding may represent a methodological artifact. Recognizing ethical dilemmas in written case descriptions represents a far easier task than recognizing ethical dilemmas in a real-life setting where information will usually have to be actively sought out and filtered. Not only will people have to seek out relevant information but they will usually be burdened with other tasks that compete for scarce attention. The weaker the signals, the more unstructured the information, the more sense-making required, the greater we would expect the effect of stress on the recognition of ethical dilemmas to be.

However, in one situation the stressful feeling of missing feedback had a strong positive correlation with unethical behavior. Lack of feedback can be compared with lack of reward, with feedback as a kind of verbal reward. Not being enough verbally rewarded seems to make leaders recognize ethical dilemmas less frequently. A feeling of not being rewarded enough had a week correlation with not recognizing ethical dilemmas. This result supports the result of Hinkeldey and Spokane (1985), suggesting a negative effect of pressure on ethical decision making. Lack of information also made people less able to recognize ethical dilemmas. The participants in this study were informed about the ethical guidelines of the company. It seems reasonable that decision makers that feel stressed over lack of information also lack the ability of recognizing the ethical dilemmas informed by the company. Finally a marginal positive correlation was found between powerlessness and the inability to recognize unethical dilemmas. A possible explanation for this result is that a lack in affecting the own situation through the normal channels in the company structure leads to frustration, which in turn leads to the seeking of alternative ways to fulfill the same needs. This situation might make decision makers less prone to recognize what is ethical and what is not. When finally finding a way of influencing their own situation, they are less critical.

Hypothesis 2 suggested that stressful situations in the workplace would make people more unethical in

their actions. It was not hypothesized what kind of stressful situations would lead to unethical acting, just that there would be such a connection. This hypothesis tested a late phase of the ethical decision-making process (Rest, 1986). Here, stressful situations were presented and tested in the study. One situation, the stressful feeling of not being rewarded enough, had a strong positive correlation with unethical behavior. Lack of reward seemed to lead decision makers to reward themselves, sometimes in unethical manners. Frustration over poor teamwork also seemed to make the decision makers act unethical. Hence, these results suggest that there is a positive correlation between some stressful situations and unethical behavior. This result supports the result of Berman's (1998) study, in the sense that there seems to be a connection between job pressure and unethical behavior. Some results though, point in the opposite direction. Punishment leading to stress seems to make people act more ethical. One explanation for this result is that punishment from the company makes people scared and not daring to act unethical. As punishment from the company is an unethical act itself, the question arises if this effect is long lasting or maybe only temporal. An alternative explanation may be that insufficient rewards may influence peoples' moral through mediating mechanisms other than stress, which include peoples' subjective perception of distributive or procedural justice (Kidwell and Bennett, 1993). Lax ethical standards may merely be one way of getting even, with respect to what people see as unfair treatment. "If others are not acting ethically, neither will I". A different interpretation might be that people use other peoples' behavior as indications as to what the ethical standards are, and adjust their ethical behavior accordingly (Lind and van den Bos, 2002). Future empirical work on the relationship between stress and ethical behavior should seek to control for some of these alternative mechanisms.

A fundamental issue with regard to our finding of both positive and negative effects of particular stressors on behavior involves the nature of the relationship between stress and ethical decision making. A possible interpretation of our finding is that stress is not a one-dimensional construct but a multidimensional composition that manifests itself through a set of different emotions as suggested by Lazarus (1993). Punishment was found to increase ethical acting. One effect of punishment may lie in creating a feeling of shame and feelings of reduced self-worth associated with the experience of failing to live up to an ego-ideal (Weiner, 1995) which in turn motivates attempts of self-improvement that would explain the positive relation between punishment and ethical intent.

More recent research suggests that whereas a fight or flight response may constitute a primary physiological responses to stress among males, females' responses may be better characterized marked by a "tend-and-befriend" response (Taylor et al., 2000). Tending here involves fostering activities designed to protect the self and offspring whereas befriending involves the creation and maintenance of social networks that may aid in the response to the stressor. As a result, females may be expected to respond to stress by acting *more* ethically as opposed to less. The small number of female leaders in our sample precluded us from testing this hypothesis, but this remains an interesting question for further follow-up studies. The other mechanism by which stress influences ethical acts suggests that stress reduces peoples' proclivity to acting ethically by depleting peoples' capacity for self-regulation (DeWall et al., 2008). This effect, unlike the effect of stress on the fight or flight response, is unlikely to vary between the sexes.

Conclusion

Finally, it is interesting to look at the whole ethical decision-making process, without making the distinction between recognizing ethical dilemmas and acting ethical. When looking at the common denominator in the two studies, it seems like reward or a lack of reward is an important factor in the ethical decision-making process. Rewards can be both materialistic, but also non-materialistic, like, for instance, positive feedback on what has been accomplished.

One interpretation of these findings is that stress influences ethical decision making primarily through its effect on pro-social behavior or the willingness and motivation to take others' interest into account (Jex et al., 2003), whereas we see little evidence of stress inducing selective perception or "tunnel vision" as described by Chajut and Algom (2003).

The result of this study suggests that the effects of reward and lack of reward on the ethical decision-making process should be investigated more in depth in future studies. This study has looked at ethical decisions in general. The design of a future study could be even further developed in not only emphasizing one ethical decision-making process but the difference between several such processes, for example; ethical decisions involving clients, other decision makers, or the employer. Traditionally, stress has been measured mostly in connection with different stressors, often involving situations taken for granted as stressful to the participants. In this study not only the effect of stressful situations were measured, but it was also controlled that the situations were experienced as stressful to the individual. It is suggested that future studies use this way (or variants of it) of measuring stressful situations, in trying to capture the cognitive part of the process.

Note

[1] "Sources and Consequences of Workplace Pressure," conducted by the American Society of Chartered Life Underwriters (CLU), Chartered Financial Consultants (ChFC), and the Ethics Officer Association, 1997.

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