

Predictors of Cheating Behavior at a University: A Lesson From the Psychology of Work

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The present study investigated students' behavior across academic departments to establish how personality, demographic, educational, attitudinal, and climate (both psychological and departmental) predicted self-reported cheating behavior at a university. Participants were 107 students from a variety of academic disciplines. The results explain 50.5% of the variability in self-reported cheating behavior in terms of demographic (male, school education qualifications), departmental climate, and individual differences (Lie and Neuroticism scales). We concluded that an expanded theoretical perspective (utilizing a wide range of person and situation variables) explained more variability than would otherwise be explained from any single perspective, and that findings from the literature of integrity at work generalize to educational settings. Finally, we discuss the limitations and implications of this research.

Interest in the causes of dishonesty dates from ancient times to the present day. Cheating, of which there are a variety of types, represents one form of dishonest behavior that can occur in industrial or educational settings. For example, in ancient China, job applicants for the civil service were sat apart to prevent potential cheating on the entrance exam. The penalty for being caught cheating, or assisting in it, was death. Recently, the annual costs of employee theft have been estimated to range between \$5 billion and \$50 billion, a figure that seems to be increasing with time (Murphy, 1993). Similarly, in education, statistics indicate an increase in the prevalence academic dishonesty. This ranges from 23% in 1941 (Drake, 1941) to 91% of college students who admit to some form of academic dishonesty today (Sims, 1995). Indeed, it is suggested that academic cheating is endemic to education (Haines, Diekhoff, LaBeff, & Clark, 1986). Possibly, certain forms of cheating, such as plagiarism, are easier to commit

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today because of recent technological advances, such as the articles on the Internet (e.g., McCollum, 1996).

Both cheating and theft represent relatively frequent forms of wrongdoing that have been dealt with by the literature in a similar manner. For example, one response to the perceived increase in theft and cheating in industry and academia, respectively, is the widespread use of various types of honor codes. Consequently, the purpose of the present paper is to integrate knowledge from the integrity-testing literature in organizational psychology and the educational literature that addresses cheating. Such integration allows us to test the generalizability of potential predictors from both literatures.

The academic literature to date offers no agreed definition of cheating. However, the *Oxford English Reference Dictionary* (Pearsall & Trumble, 1996) defines *cheating* as "to deceive or trick, deprive of, or to gain unfair advantage by deception or breaking rules, especially in a game or examination" (p. 249). Some researchers have explained dishonesty, at least in part, as a function of demographic characteristics (Baird, 1980; Eve & Bromley, 1981; Murphy, 1993; Whitley, 1998). However, several studies have reported no significant differences between the incidence of cheating and gender (Evans, Craig, & Mietrel, 1993; Haines et al., 1986; Roig & DeTommaso, 1995), while others have reported that women are less likely than men to cheat (Baird, 1980; May & Loyd, 1993; Whitley, 1998).

Indeed, support for the previous notion that women are more honest than men is found in the organizational literature. In a recent study of over 680,000 job applicants across over 100 organizations, Ones and Viswesvaran (1998) found that women scored higher than did men on tests of integrity. Furthermore, their findings indicated minor age differences, although age was treated categorically and so does not allow for an analysis of those close in age proximity. Indeed, findings are generally mixed with regard to age in the business ethics and cheating literature (Crown & Spiller, 1998; Ford & Richardson, 1994), although a recent review of the cheating literature indicates that those who cheat are older (Whitley, 1998).

Previously mixed findings that emerged from both the business ethics and cheating literatures include the role of employment status (part-time vs. full time), years in education and tenure, and age (Crown & Spiller, 1998; Ford & Richardson, 1994; Murphy, 1993). Similarly, some reviews have concluded that there is a negative relationship between cheating and grade point average (Crown & Spiller, 1998), while others have concluded that the same relationship is positive (Whitley, 1998). Equally, some studies have indicated that those with lower actual school achievement cheat more (Bushway & Nash, 1997), while other studies have indicated the reverse to be the case (Whitley, 1998). Furthermore, some studies have suggested that cheats are more likely to be single rather than married (Haines et al., 1986), while others have suggested that cheats are more

likely to be married (Whitley, 1998). This leads to the following hypothesis regarding demographic antecedents of cheating:

Hypothesis 1. Individuals more likely to cheat will be male, will be older, will have higher average grades at university, will have lower school education grades; and more tentatively will be married rather than single, will be employed full time, and will have studied longer.

Personality variables implicated as determinants of cheating range from irresponsibility, lack of dependability, and disregard for rules and social norms (Collins & Schmidt, 1993), to extraversion, neuroticism, and conscientiousness (Bushway & Nash, 1977). However, these findings are equivocal. Some have found no relationship between neuroticism, extraversion, and unethical behavior, while others have reported a significant relationship. Relationships for other variables (locus of control, economic orientation, and political value orientation) have also been investigated (Hegarty & Sims, 1978, 1979).

Examination of the relationship between personality and cheating led Hetherington and Feldman (1964) to describe the personality of student cheaters as dependent on four different types of cheating behaviors: *individualistic-opportunistic*, cheating by impulsive and unplanned people; *individualistic-planned*, cheating is pre-conceived; *social-active*, occurs when more than two people cooperate to cheat and both parties actively investigate the cheating possibilities; and *social-passive*, cheating occurs when the individual's role is passive.

Sackett and Wanek (1996) reviewed the relationship between personality and integrity measures. Evidence from meta-analysis suggests that integrity tests relate to conscientiousness, agreeableness, and neuroticism, respectively. However, the conscientiousness relationship with integrity was partialled to almost zero when the conscientiousness-performance relationship was accounted for. Furthermore, those with high lie scale scores or impression-management scores score highly on integrity tests (Sackett & Wanek, 1996). In sum, consideration of the role of personality as an antecedent of cheating leads to the following hypothesis:

Hypothesis 2. Individual cheating will be related to high psychotism, emotional stability, extraversion, and lie scale scores.

Moral attitudes also are relevant in determining the likelihood of a behavior, as shown by various researchers. For example, Beck and Ajzen (1991), working within the framework of the theory of planned behavior, found attitudes to be predictive of a variety of dishonest behaviors; namely, cheating, shoplifting, and lying (see also Whitley, 1998).

The literature on integrity at work also provides evidence of the relationship between attitudes and honesty. In a large study of deviance at work, Hollinger and Clark (1983) found that the best single predictor of theft was employee attitudes. When employees felt exploited by the company, then these workers were more likely to be involved in acts against the organization as a mechanism to correct perceptions of injustice. In this sense, cheating, as with theft, can be seen as a way of resolving perceptions of inequity.

Overt tests of attitudes toward theft are widely used in industry. Generally, they consist of two sections. A first section usually consists of attitudes about theft, such as rationalizations of theft. The second section usually consists of admissions of various types of wrongdoing. One assumption of the use of attitudes in overt integrity tests is based on the idea that individuals who are more likely to commit dishonest acts view these behaviors more favorably and less stringently than do those who are less likely to commit dishonest actions. Support for the predictive validity of attitudinal measures of theft is presented by meta-analytic evidence showing that overt measures of integrity predict counterproductive job behaviors (Ones, Viswesvaran, & Schmidt 1993). This leads to the following hypothesis:

Hypothesis 3. Those who cheat more are likely to have a narrow definition or bandwidth as to what entails cheating.

Individualistic explanations of dishonest behavior suggest that those who have honesty traits are less likely to have engaged in dishonest behavior across situations. A number of authors, however, have proposed that the situation determines honest behavior. In a classic series of studies, Hartshorne and May (1928) questioned the notion that honesty is a stable trait. They showed great situational variability and little individual consistency in 24 laboratory-based studies of cheating and stealing. Hartshorne and May concluded that dishonesty is not a characteristic of the person, but rather of the situation.

More recent studies have suggested that physical position, detection, honor code, and norms all contribute to determining cheating (Whitley, 1998). Similarly, Wright and Mischel (1987) reported that traits are relevant in some situations, but not in others. Particular situational characteristics could either heighten or reduce the effect of personal variables that become dependent on the strength of the situation. That is, a strong situation is perceived to give clear messages about the type of behavior that is appropriate and, consequently, strong pressure to conform and act ethically. This allows little room for individuals to express their own personalities or ethical codes (Price & Bouffard, 1974). Alternatively, weak situations where messages are not strong, or are ambiguous, result in individuals basing their behaviors on their own beliefs, values, and attitudes, rather than on social determinants. At the extreme end of this continuum are situations

that facilitate dishonest behavior, which present individuals with a temptation that is too hard to resist, even for those with strong ethical codes. However, it is also the case that people choose the situations in which they find themselves, which is (in part) a function of their personalities (Argyle, Furnham, & Graham, 1981). Consequently, people choose, change, and adapt to the social situations in which they find themselves.

Situations are considered important to both understand and predict dishonest behavior. Murphy (1993) defines a *situation* as a "diverse mix of variables in the environment that are potentially relevant to the individual's decision to engage in or refrain from committing specific dishonest acts" (p. 143). However, situations are still dependent on the individual's perceptions about these variables. That is, it does not matter how strong organizational rules are, so long as the individual perceives those rules to be strong. It seems that perceptions of acceptability of cheating are determined by the individual's beliefs, attitudes, traits, values, and by actual norms.

The importance of the perception of situations is considered in the organizational literature through the construct of organizational climate. Organizational climate has been implicated previously in ethical and unethical behavior. There is evidence that organizational climates exist for employee theft (Cherrington & Cherrington, 1985), ethical climate (Victor & Cullen, 1988), and whistle blowing (Miceli & Near, 1985). Similarly, there is evidence that different cultures have different crime rates (e.g., Triandis, 1995). Indeed, Murphy (1993) argued that organizational climate is a fundamental influence on ethical or unethical behaviors at work. The impact of norms in dictating behavior will also depend on the clarity of the message and on how cohesive the group is. For instance, clear norms of a cohesive group might virtually dictate the behavior of most group members (Sherif & Sherif, 1969). Cohesive groups have a strong sense of loyalty to and identification with the group. Strong attachment to the group is more likely to encourage behavior consistent with group norms in whichever direction the norms might dictate.

The assessment of organizational climate might be at different levels of analysis, reflecting different research traditions (Dansereau & Alutto, 1990). The individual level of perceived climate refers to what James and Jones (1974) term *psychological climate*. Aggregated measurement refers to organizational climate or, in the present study, departmental-level climate. The importance of understanding differences and similarities of different levels of analysis is well known. Yet, most studies of deviant behaviors focus on only one level of analysis, reflecting a particular research tradition. Consequently, the present study considers both aggregated (departmental) and individual (psychological) levels of climate analysis. In sum, climate is analyzed at two levels of analysis: individual and departmental and so follows the conceptualization of others of climate as a multi-level construct (Dansereau & Alutto, 1990; James & Jones, 1974).

Hypothesis 4. Cheating will occur in departments where individual and departmental norms are perceived of as relatively lax (not strict). Furthermore, individuals with a strong sense of belonging to the department will be less likely to cheat.

Method

Participants

A total of 150 questionnaires were distributed to students studying various degrees within two schools at the University of Surrey: 75 to the Human Sciences School, and 75 to the School of Mathematical and Computing Sciences. A total of 109 undergraduate students completed the questionnaires. Respondents were studying for the following degrees: Psychology ($n = 22$), Sociology ($n = 20$) Applied Psychology and Sociology ($n = 18$), Economics and Sociology ($n = 2$) Computing and Information Technology ($n = 24$), Mathematics ($n = 5$), Mathematics and Statistics ($n = 2$), Mathematics and Business ($n = 5$), Mathematics and Computing ($n = 5$), Civil Engineering ($n = 4$), and no degree recorded ($n = 2$).

Overall, females ($n = 70$) accounted for 64% of the sample. Females were more heavily represented by the School of Human Sciences, whereas males were more heavily represented by the School of Mathematical and Computing Sciences. The majority of participants ($n = 86$, 79%) were 19 to 25 years old, and in their final year of studies ($n = 86$, 79%). No first-year students were included in the study, as it was believed that they would not have experienced exam cheating in their department, nor have a clear knowledge of departmental rules regarding cheating. Finally, 95 (87%) subjects were single, and 44 (41%) worked in full- or part-time jobs.

All participants were approached randomly on campus. Participants were individually informed about the aims of the study and were assured of absolute confidentiality by means of an introductory letter.

Questionnaires

Eysenck Personality Questionnaire (EPQ-R; Eysenck & Eysenck, 1975). This questionnaire measures personality in terms of extraversion/introversion (E) neuroticism/stability (N), and psychoticism (P). A lie scale (L) also is included. People high in extraversion are described as sociable, lively, and impulsive and have a need for stimulation. People high in neuroticism are described as nervous and depressive. People high in psychoticism are described as tough-minded, solitary, brutal, and uncaring. Psychoticism may be a composite of both agreeableness and conscientiousness, as defined by the five-factor model (Eysenck, 1994). People high on the lie scale attempt to present a positive self-image.

We used the EPQ-R, as opposed to a questionnaire based on the Big Five personality factors, for the following reasons. First, notable previous studies used

Eysenck's (Eysenck & Eysenck, 1975) questionnaire of personality (e.g., Hegarty & Sims, 1978). Second, the scale descriptions of the five-factor models vary by theorist. Third, Eysenck's EPQ contains a lie scale, and previous research has suggested a relationship between the EPQ lie scale and integrity tests (Sackett & Waneck, 1996). Finally, Eysenck's (1997) theory of personality is more closely associated with psychophysiological functioning than the Big Five.

Student Cheating Questionnaire. This questionnaire was especially developed to measure the person and situation variables of interest in the present study. It was developed from the literature review and a pilot study, but especially was based on the work of Waugh, Godfrey, Evans, and Craig (1995).

The final version of the questionnaire provides information on the following variables: (a) *sample demographics*—gender, age, year of study, average grades obtained during university, degree, educational qualifications at school, marital status, and working status; (b) *perception of cheating definition scale*—this scale measures attitudes toward cheating within university, including examples of individualistic-opportunistic, social-active, and social-passive cheating (Hetherington & Feldman, 1964). The scale consists of 20 items. For each item (e.g., "Using secret notes during an examination that you are not supposed to have"), participants were assessed on a 4-point scale, ranging from 1 (*is definitely cheating*) to 4 (*is definitely not cheating*). High scorers perceive and define many more behaviors to be cheating than do low scorers; (c) *perception of rules*—a scale that measures familiarity with departmental rules regarding dishonest behavior. The scale consists of six items. Items are assessed on a 3-point scale: *know a lot*, *know something*, and *know a little*. A sample item is "Do you know the penalties if you hand in late work without reason?" High scores indicate little knowledge; (d) *departmental membership* measures the strength of feeling part of the department. This scale consists of eight items (e.g., "I feel part of my department") and is rated on a 5-point Likert scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). High scorers did not feel part of the department; (e) *psychological climate*—measures knowledge of departmental norms for dealing with cheats. This scale consists of 20 items (e.g., likelihood of staff taking action to punish cheats) and is rated on a 5-point scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). Each student's perception of these norms was used as an individual measure of climate. A high score indicated a strict climate. This was an individual perception and consequently reflected what James and Jones (1974) termed *psychological climate*; (f) *departmental climate*—the departmental aggregate score of psychological climate for each degree course was taken as a measure of departmental climate. A high score indicated a strict climate. This was an aggregated perception and consequently reflects what James and Jones termed *organizational climate*, but in this study reflects departmental climate; and (g) *self-reported cheating behavior*—measures dishonest behavior in course work, group work, and examinations. This was the dependent variable.

Table 1

Descriptive Statistics of Variables

	<i>M</i>	<i>SD</i>	α
Extraversion	14.90	4.67	.83
Neuroticism	13.00	5.90	.88
Psychoticism	6.10	3.63	.70
Lie scale	6.84	4.04	.79
Perception of cheating	1.35	0.31	.81
Perception of rules	2.05	0.57	.87
Departmental membership	2.66	0.67	.77
Perception of climate	2.83	0.40	.75
Self-reported cheating behavior	0.34	0.30	.75

The scale consists of 17 behavioral items (e.g., "Presented another student's work as your own") rated on a 5-point frequency scale ranging from 5 (*never*) to 1 (*almost always*). As a precautionary measure against contamination, this scale was presented at the end of the survey (Podsakoff & Organ, 1986). High scores reflected high levels of self-reported cheating behavior.

Results

The means, standard deviations, and Cronbach's alphas for all of the scales used in the study are presented in Table 1. Alphas were respectable and ranged from .70 to .87.

Correlations between the scales are shown in Table 2. There tended to be relatively low correlations between the independent variables. Departmental climate was modestly but significantly correlated with psychological climate ($r = .25, p < .05$), perception of cheating definition ($r = .22, p < .05$), and departmental membership ($r = .24, p < .05$). Psychoticism was significantly correlated with departmental membership ($r = .25, p < .05$), and neuroticism was significantly correlated with departmental climate ($r = -.23, p < .05$). The lie scale was significantly correlated with extraversion ($r = -.24, p < .05$), neuroticism ($r = -.33, p < .01$), and psychoticism ($r = .24, p < .05$). Self-reported cheating behavior was significantly correlated with cheating definition ($r = -.35, p < .01$), perception of rules ($r = .21, p < .05$), psychological climate ($r = -.33, p < .01$), departmental climate ($r = -.33, p < .01$), psychoticism ($r = .22, p < .05$), and the lie scale ($r = -.21, p < .05$).

Entry regression was used to identify significant predictors of self-reported cheating behavior. The predictors are reported in Table 3. The results suggest self-

Table 2

Correlations Between the Variables

	SRCB	Dept	Cheat	Rules	PsychCl	DeptCl	E	N	P
Self-reported cheating behavior (SRCB)	—								
Departmental membership (Dept)	-.06	—							
Cheating definition (Cheat)	-.35**	.11	—						
Perception of rules (Rules)	.21*	.04	-.06	—					
Psychological climate (PsychCl)	-.33**	-.19	.14	-.18	—				
Climate of department (DeptCl)	-.33**	.24*	.22*	-.12	.25*	—			
Extraversion (E)	-.04	-.02	-.03	-.14	.09	.11	—		
Neuroticism (N)	.11	.17	.08	.09	-.23*	.06	-.10	—	
Psychoticism (P)	.22*	.25*	-.18	-.02	-.17	.00	.17	.04	—
Lie scale (L)	-.21*	-.10	-.06	-.18	.11	.00	-.24*	-.30**	-.24*

* $p < .05$. ** $p < .01$.

Table 3

Entry Regression Using Self-Reported Cheating Behavior as the Dependent Variable

	β	t	p	R	R^2	Adj. R^2
Constant		0.42	.67			
Gender	-.46	4.49**	.00			
Age	-.09	0.88	.38			
Year of study	.06	-0.54	.59			
Average university grades	-.15	1.40	.16			
School educational qualifications	-.28	2.75**	.00			
Marital status	-.02	-0.29	.77			
Working status	-.05	0.46	.64			
Psychoticism	.14	-1.19	.23			
Neuroticism	.21	-1.95*	.05			
Extraversion	-.12	1.02	.31			
Lie scale	-.23	1.99*	.05			
Cheating definition	-.13	-1.27	.20			
Perception of rules	.13	1.34	.18			
Departmental membership	-.13	1.18	.24			
Perception of climate	-.16	1.63	.10			
Average departmental climate	-.28	2.25*	.02			
				.79	.63	.505

* $p < .05$. ** $p < .01$.

reported cheating behavior by being male, having fewer educational qualifications at school, being in a relaxed departmental climate, high neuroticism, and having a low lie scale score. The linear combination of these five variables explained 50.5% of the variance in self-reported cheating behavior at university. As can be seen from Table 3, the other variables measured in this study were not significant predictors of self-reported cheating behavior within the multiple regression.

Discussion

The results substantially support a majority of our hypotheses and show that 50.5% of the variance in self-reported cheating behavior is predictable from a linear combination of five variables. Significant predictors were demographics

(gender and school educational qualifications), individual differences (neuroticism and a low lie scale score), and departmental climate. This demonstrates that a wide range of individualistic and situational variables are necessary to effectively predict dishonesty at university.

The results suggest that men admitted to cheating at university more than did women. Such results agree with an early study by Bushway and Nash (1977), more recent studies (e.g., Aiken, 1991; Ward, 1986), and a recent review on the cheating literature (Whitley, 1998), and are consistent with previous findings on integrity testing at work (Ones & Viswesvaran, 1998). However, these findings contrast and question the general conclusion drawn by Crown and Spiller (1998) that gender differences over the last 20 years are minimal because of the increased similarity of role requirements between men and women.

Two indexes of grade point average and achievement were taken. The first was school educational qualifications (a pre-university marker, acting as a proxy for past achievement), and the second was a university average, which acts as current grade point average. The results show that having higher school educational qualifications results in lower levels of self-reported cheating, suggesting that those who cheat are less likely to succeed at school. These findings are congruent with the conclusions of others (Bushway & Nash, 1977; Crown & Spiller, 1998), but contrast with others (Whitley, 1998).

The results show that high neuroticism predicted cheating. These results are in accordance with the conclusion of Bushway and Nash (1977), but contrast with the more recent general conclusion of Crown and Spiller (1998) that suggests no personality effects. Since males generally admit to lower neuroticism than women, and both effects are significant within the multiple regression, it seems that gender and neuroticism act relatively independently of each other in the prediction of cheating behavior. Furthermore, this finding supports the contention that findings from the integrity literature of work settings apply equally to educational settings. For example, Hollinger and Clark (1983) found that employees who engage in theft are emotionally unstable. Finally, this result is generally supportive of the relationship of personality to integrity at work (Sackett & Waneck, 1996).

A personality trait that significantly correlates with cheating behavior, although it is not a significant predictor within the regression model, is psychoticism. This partially supports our hypothesis regarding the role of psychoticism as a determinant of cheating. In contrast to previous researchers in education (e.g., Bushway & Nash, 1977), we found no evidence that extraversion was related to cheating behavior. Two possibilities explain these findings. First, the literature on workplace integrity would suggest no such relationship (Sackett & Waneck, 1996). Second, the breadth of our criterion variable includes a variety of cheating behaviors that have not been included generally in previous studies.

The lie scale is both a significant correlate and predictor of self-reported cheating. It seems from the regression that those people who have a low lie scale

score are more likely to be cheats. This is interesting when one considers a lie scale as a substantial personality trait, as some researchers do (e.g., McCrae & Costa, 1983). From this perspective, it appears that those who are low in impression management are more likely to cheat. Indeed, this view is reinforced when one considers that studies suggest a relationship between impression management and integrity (for a review, see Sackett & Wanek, 1996).

A narrow definition of what cheating entails was a significant correlate, although not a significant predictor of cheating. This suggests that cheats are loath to define their own behavior as cheating. Consequently, the results suggest that cheats and non-cheats both have attitudes toward cheating that reflect their actual behavior. Finally, this result at least partially supports the applicability of the logic of integrity testing to student cheating.

The findings show that a relaxed psychological climate and departmental climate both correlated with cheating, although only departmental climate was significant within the regression. The potential relationship between climate and cheating was implied from the workplace integrity literature (Cherrington & Cherrington, 1985; Murphy, 1993). The suggestion is that perceptions of strictness influence cheating, and departmental strictness in applying sanctions influences cheating. These results suggest that departments might reduce the likelihood of students engaging in dishonest behavior as a result of the perceived assessment of negative consequences.

The scale of perception of rules (which measure perceived familiarity with departmental rules regarding dishonest behavior) was a significant correlate of self-reported cheating behavior, but was not significant within the multiple regression. This suggests that cheats have less knowledge of departmental rules than do non-cheats. It might be that cheating occurs through lack of familiarity with the rules, or that cheats prefer to remain unaware of the rules regarding their behavior so as not to define it as cheating, as indicated by the attitudinal correlate in the present study. Support for this argument is found in the organizational literature. That is, whistle blowers have a greater perceived knowledge of channels for disclosure than do others (Miceli & Near, 1984). Consequently, our findings are coherent with the notion that moral people (such as whistle blowers or non-cheats) ensure that they are familiar with the rules, whereas their less moral counterparts (or cheats) ensure that they do not know the rules.

Our attention now turns to six potential limitations and suggestions for future studies. First, it seems unlikely that common error variance (resulting from questionnaire methods being used to collect all of the information used in this study) could explain our results completely. Potentially, further studies could benefit by using additional measures of actual cheating behavior. However, the additional benefit of comparing those who are known cheats and those who are not appears to be somewhat less objective than might be thought, as it could be that those who cheat are merely unlucky enough to be caught.

Second, a possible limitation of all studies considering cheating is that those who admit to cheating might do so as a result of being more honest. This issue is contentious and has been dealt with at considerable length in the integrity at work literature. Briefly, those who consider self-admissions as confessions highlight that when lie scale scores are accounted for, there is a decrease in correlations between integrity and measures of performance (e.g., Guastello & Rieke, 1991). Alternatively, those who consider admissions valid note that the correlations generally remain in the direction originally predicted, a view reinforced by meta-analysis (e.g., Ones et al., 1993; Sackett & Wanek, 1996).

Third, future studies might focus on the role of the five-factor model. For example, conscientiousness might act as a determinant of individualistic cheating, and agreeableness as a determinant of allowing another to cheat.

Fourth, future studies also might focus on the role of organizational culture in predicting cheating. Fifth, much of the present study addresses perceptions. For example, while the present study addressed perceptions of the rules, future studies might address the discrepancy between actual rules knowledge and perceived knowledge of the rules. Sixth, future studies might consider the generalizability of these findings in work settings.

In summary, there are four main conclusions that can be drawn from this study. First, the results of this study suggest that the departmental climate is a very important variable in the prediction of wrongdoing, and therefore cheating is not just the personal responsibility of the individual. Second, this study suggests that at least some of the logic of integrity testing generalizes to educational settings since similar results are found. Third, the practice of utilizing measures of overt integrity (attitudes) is severely restricted in the amount of behavior it can predict. Consequently, we strongly advise practitioners to use other variables in addition to attitudes. Fourth, we have been able to predict a large amount of the variance in cheating behavior by using multiple predictors from a variety of perspectives.

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