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PREDICTION OF SOCIALLY UNDESIRABLE BEHAVIORS:
CHEATING, SHOPLIFTING, AND LYING

A Thesis Presented

by

LISA MARIE BECK

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE

September 1989

Department of Psychology


PREDICTION OF SOCIALLY UNDESIRABLE BEHAVIORS
CHEATING, SHOPLIFTING, AND LYING

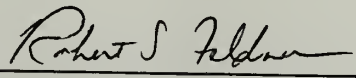
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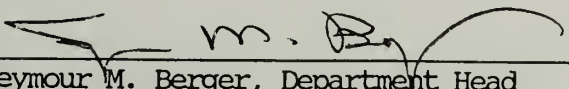
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CHAPTER 1

INTRODUCTION

Background

Socially undesirable behaviors such as cheating and stealing are common behaviors with widespread consequences. The "consumer crime" of shoplifting has been estimated to cost U.S. businesses up to five billion dollars every year in direct losses, not including expenses for security programs (Kallis & Vanier, 1985). And, although the effects of academic dishonesty cannot be estimated in terms of economic losses, the results of such "crimes" are no less devastating. Given the effect of such behaviors on society, it is not surprising that social scientists have been attracted to the study of behaviors like shoplifting and cheating.

Some investigations have focused on practical issues, such as assessing media communications designed to discourage shoplifters (Sacco, 1985), and developing employment testing programs to detect potentially dishonest workers (Sackett, Burris, & Callahan, in review; Sackett & Harris, 1984). Others have taken a more psychological approach, theorizing that personality traits (E.A. Beck & McIntyre, 1977) or thought processes (Weaver & Carroll, 1985) may differentiate between shoplifters and non-shoplifters. Hartshorne and May's (1928) extensive series of studies on deceit concentrates on biographical features of cheaters and noncheaters, yielding an important compilation of methods for studying deception, but little of general theoretical interest.

More relevant to social psychological research is Corey's (1937) study using classroom cheating as the target behavior, which was one

of the first explorations of the relation between attitudes and behavior. Corey found no correlation between attitudes toward cheating and actual cheating behavior, but recent advances have made improved prediction of overt behavior possible. DeVries and Ajzen (1971), in support of Fishbein's (1967) model, demonstrated that behavioral intentions and self-reports of cheating were highly correlated with attitudes toward cheating as well as perceived social norms related to cheating. Furthermore, other variables, such as sex, GPA, and religiosity, were generally unrelated to behavioral intention and its predictors. Fishbein's model set the stage for two important theories enabling behavioral prediction.

Theory of Planned Behavior

Fishbein and Ajzen's (1975) theory of reasoned action and, more recently, the theory of planned behavior (Ajzen, 1985) have generated a great deal of research focusing on the prediction and explanation of behavior. Both theories hold that voluntary behavior is most closely linked to intention, which reflects motivation, and determines how hard an individual will try to perform a particular behavior (see Figure 1). The prediction of behavior from intention is only limited by the currency of information about the intention. One intention may be replaced by another up until the moment the intended behavior is performed. Intention is in turn influenced by several factors which result from sets of salient beliefs about performing the behavior. Attitude toward a particular behavior is defined as the strength of an individual's positive or negative evaluation of performing the behavior. Subjective norm refers to the individual's perception of social pressure to perform or not

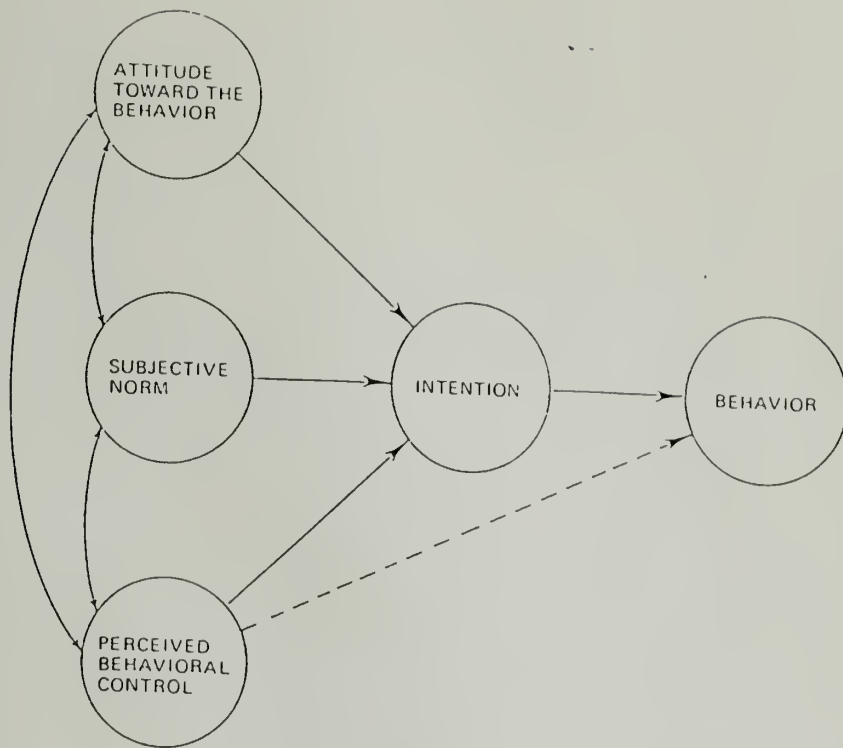


Figure 1.

The Theory of Planned Behavior

perform the behavior, and the willingness to comply with others' wishes. Some behaviors may not be completely under volitional control, and the theory of planned behavior makes provision for such cases, by including a third factor, perceived behavioral control, which is the degree of perceived ease or difficulty of performing the behavior, as represented in the figure by an unbroken arrow from the control component to intention. The broken arrow in Figure 1 indicates that perceived behavioral control can also be linked to behavior directly, to the extent that perceptions of control reflect the individual's actual control over performing the behavior.

Each of the three components influencing intention is a function of a relevant set of beliefs. Attitudes correspond to behavioral beliefs, relating to the perceived outcomes of performing a specific behavior. Each belief contributes to attitude in proportion to the subjective probability that the outcome will occur. Subjective norms are determined by normative beliefs, the likelihood that other individuals or groups would approve or disapprove of performing the behavior, weighted by the individual's motivation to comply with each of the individuals or groups. Control beliefs are associated with the third component, perceived behavioral control, and refer to factors that are perceived to facilitate or hinder behavioral performance, relative to the strength of the value placed on each factor.

Research on the theory of planned behavior has shown that attitudes, subjective norms, and perceived behavioral control can predict intention and behavior (e.g. Ajzen & Madden, 1986, Schifter & Ajzen, 1985). Although some research has tested the model's application to socially undesirable or deviant behaviors (e.g. Hensing, Elffers, & Weigel, 1988), most has concentrated on more socially acceptable behaviors such as weight loss (Schifter and Ajzen, 1985) and class attendance (Ajzen and Madden, 1986). The present studies were conducted to test the theory of planned behavior in predicting undesirable behaviors (cheating, shoplifting, and lying to get out of class assignments) in a college sample. These behaviors were selected because they are common and familiar to college students, and because they represent important issues in economic and academic dishonesty.

There is some evidence that "criminal" behavior does not conform to rational, expected utility rules (cited in Weaver & Carroll, 1985), but that criminals view situations in unconventional ways, perceiving opportunity and challenge where noncriminals perceive certain punishment. This view may seem to suggest that the rational approach to predicting behavior may not be appropriate for behaviors like cheating, shoplifting, and lying. However, the theory of planned behavior assumes that every behavior is in some sense reasoned, in that it does not occur without cognitive support, however unconventional that support may be. The current study is based on this assumption, and tests the applicability of the theory in predicting socially undesirable behavior.

Moral Obligation

Fishbein's (1967) theory, the forerunner of the theory of reasoned action, originally included a measure of personal normative beliefs as a third predictor of behavioral intention (in addition to attitudes and social normative beliefs) but this component proved to be essentially equivalent to behavioral intention, and was dropped from the model (Ajzen & Fishbein, 1969; Ajzen & Fishbein, 1970). However, Gorsuch & Ortberg (1983) have recently reported that a moral obligation component was useful in the prediction of behavioral intentions for certain situations. Gorsuch and Ortberg used a sample of adult Protestant Sunday school members, who could be expected to have similar perceptions of the moral relevance of particular situations. In the two situations chosen as morally relevant by the authors (returning a mistaken \$500 check from the IRS; turning down a promotion that would require missing church on

Sunday), as well as one of the two situations selected as not being morally relevant (going to a later church service than planned), the moral obligation component (assessed by responses on a 7-point agree vs. disagree scale to the question, "I have a moral obligation to . . .") accounted for a significant proportion of the variance. The results obtained by Gorsuch and Ortberg indicate that a moral obligation component may be appropriate for the prediction of behaviors like cheating, stealing and lying, so measures of moral obligation are included in the present studies.

Social Desirability

Some subjects responding to questionnaire items about socially undesirable behaviors may tend to distort their responses to be consistent with perceived social expectations. A widely-used test of social desirability motivation is included in the present studies in order to measure individual differences in social desirability responding. The Marlowe-Crowne Social Desirability Scale (SDS; 33 items; Crowne & Marlowe, 1960) was developed to detect the tendency of clinically normal individuals to distort responses ("fake good") in psychometric situations. The SDS is based on the same reasoning as the MMPI Lie subscale, but uses items which are more relevant to a normal population, for example, "I'm always willing to admit it when I make a mistake", and "I always try to practice what I preach".

Reasoned vs. Spontaneous Action

Given its previous success with predicting many different behaviors, the theory of planned behavior is hypothesized here to predict socially undesirable behaviors as well. However, it is also

possible that the theory of planned behavior will be less successful in accounting for undesirable behaviors. A behavior such as shoplifting may not always be based on stable intentions. For example, someone in a store may find an attractive item, notice that no one is near, and impulsively walk out with the item hidden in a pocket. Such behavior is not strictly rational or planned, and may not be predictable from questionnaire responses. This action may even directly contradict the individual's beliefs about stealing. Individual differences in the tendency toward reasoned action would affect the prediction of behavior in the context of the theory of planned behavior.

Four different scales are used to detect the moderating effects of individual differences in reasoned vs. spontaneous or impulsive action. The Spontaneous Action and Reasoned Action Scales (Ajzen & Watters, unpublished) were recently devised specifically to differentiate between subjects whose behavior tends to be spontaneous or intuitive, and subjects whose behavior tends to be more reasoned, and therefore more predictable within the framework of the theory of planned behavior.

S.B.G. Eysenck & H.J. Eysenck (1977) have developed an impulsiveness scale which is composed of 43 items from several different impulsiveness measures. The items form four different factors underlying the broad measure of impulsiveness: narrow impulsiveness, which is correlated positively with Eysenck's neuroticism and psychoticism personality dimensions, risk-taking, non-planning, and liveliness.

A related personality factor is measured by the Need for Cognition Scale (NCS; Cacioppo & Petty, 1986). This 18-item scale measures an individual's motivation to engage in and enjoy effortful analytic tasks. Subjects' scores on these scales provide information as to the moderating influences of the disposition to non-reasoned action on the attitude-behavior relationship.

The hypothesis of the present study is that the relationship between predictors and behavior will be stronger for subjects who have dispositions toward reasoned action, and weaker for those with dispositions toward spontaneous action. This study will also provide information on more general differences in the importance of reasoned action. Certain behaviors may differ in susceptibility to spontaneous performance. For instance, lying to get out of a class assignment is probably less likely to be a spontaneous behavior than shoplifting, and cheating may lie between the two.

Honesty of Self-Reports

The present research depends on self-reports of undesirable behavior as the criteria for prediction. Unfortunately, dishonest self-reports are undetectable and could affect the results. This concern is made especially salient by a recent study of tax evasion (Hessing, et al., 1988; Elffers, Weigel, & Hessing, 1987) which calls self-reports of deviant behavior into question. In this study, only 31% of objectively identified tax-evaders admitted to having misrepresented their income or deductions for the years in question, despite the subjects' knowledge that official documentation of their behavior was available to the researchers. Moreover, 25% of nonevaders (as determined by independent reviewers

using strict criteria) admitted to having misrepresented their income or deductions. Attitude measures were shown to predict self-reports of deviant behavior, but not actual deviant behavior.

However, the questions used by the investigators may not have been valid for the purposes of their study. Hessing et al. (1988) reported responses to the question "Did you, when filing your 1981 tax return, underreport your income or report unwarranted deductions?" Although all of the respondents in the "evader" category had settled government claims against them, many may have believed that they had done nothing wrong and had been treated unfairly by the government. On the other hand, respondents in the "nonevader" category may have had income that was not subject to third party reporting (cash gifts, etc.) so that even close examination of their records would not reveal the inconsistencies that were later reported. Hessing et al. assert that their question is equivalent to the question, "Did the government successfully challenge the accuracy of either the income you reported or the deductions you claimed?". However, if this question had in fact been asked, the responses might have shown a much different relation to government records. Kinsey (1988) notes that tax officials' lack of knowledge about taxpayers' economic activities, as well as the taxpayers' ignorance regarding IRS appeals procedures, both contribute to discrepant reports. Kinsey's arguments cast doubt upon the conclusion of Hessing et al. that respondents are simply lying (either by denying or by "boasting") about their tax evasion.

Contrary to the findings of Hessing et al. (1988), there is evidence that in many situations, self-reports of undesirable

behavior can be quite honest. Himmelfarb and Lickteig (1982) measured the proportions of admissions to two of the behaviors of interest in the current study (cheating and shoplifting) among others, when the responses were obtained through the randomized response technique (RRT) and when they were obtained by direct questions. The randomized response technique is a means of increasing subjects' willingness to answer questions truthfully by insuring that the experimenter has no way of knowing a subject's true answer to sensitive items on a questionnaire. The RRT has been shown to increase self-reporting of socially undesirable behaviors such as child abuse (Zdep & Rhodes, 1976) and drug use among high school students (Goodstadt & Gruson, 1975).

In Himmelfarb and Lickteig's study, subjects were instructed to answer "yes" to a self-report item if a toss of three coins came up all heads, "no" if it came up all tails, and truthfully for all other combinations. The proportion of truthful admissions to each behavior is known (approximately 75% in Himmelfarb & Lickteig's study), even though the experimenter does not know whether any particular response is truthful. Using a large group of subjects in order to overcome error variance, the estimated proportion of subjects truthfully admitting to each behavior was obtained and compared with a different subject sample's anonymous responses to direct questions (DQ) about the same behaviors. In this study, 79.3% (DQ) vs. 78.8% (RRT) admitted to having ever cheated and 71.2% (DQ) vs. 68.2% (RRT) admitted to having ever shoplifted.

These results indicate that direct questioning with guaranteed anonymity for the subjects can provide honest reports for the

behaviors in question. Admissions to cheating and shoplifting appear to represent honest responses, not only because so many subjects admit to these behaviors, but also because the difference in admission rates in the RRT and DQ conditions is small. These two behaviors were associated with high negative social desirability in the Himmelfarb and Lickteig study, which indicates that subjects would tend to lie by saying they had not performed the behaviors. The third behavior of interest in the present study, lying to get out of class assignments, is probably also associated with negative social desirability, but it seems doubtful that subjects would be more likely to lie about this behavior than about the two others. Apparently, most college student subjects in an anonymous situation are willing to respond honestly to questions about undesirable behaviors. Nevertheless, the accuracy of self-reports in the present context is an important consideration and was explored in a pilot study.

Pilot Study

The design for the main studies required that the experimenter be able to contact subjects for a follow-up questionnaire, and match each subject's responses from both sessions. The need to provide identifying information may appear to subjects to be a threat to anonymity, and therefore may interfere with honest responding. A pilot study was conducted to aid in the development of the questionnaire for the main study, and to determine the best procedure for obtaining honest responses to questionnaire items. The pilot questionnaire assessed how many times a subject had performed each behavior in the past year. Self-reported admissions

of having performed each of the behaviors included responses to open-ended questions regarding the methods used to perform the behavior and to avoid getting caught. Attitudes, subjective norms, and perceived behavioral control were assessed by 7-point scales. For each behavior, subjects estimated proportions of other college students performing the behavior ("In the past year, what percentage of students do you think have taken something from a store without paying?") and social desirability ("People would say they had used a false excuse to get out of turning in a class assignment on time or taking an exam when they really hadn't" vs. "People would say they hadn't used a false excuse to get out of turning in a class assignment on time or taking an exam when they really had"). Open-ended questions regarding subjects' perceptions of people who would approve/not care about the subject performing the behavior, advantages/disadvantages, and ease/difficulty of performing the behavior were designed to assess beliefs about each behavior. Common responses to these questions were translated into items on the main questionnaire measuring normative beliefs, behavioral beliefs and control beliefs (respectively). All of the items regarding a particular behavior appeared together on the pilot questionnaire. The behaviors were assessed in the same order for all subjects: cheating, shoplifting, then lying.

The pilot study provided information on the subjects' willingness to admit to the three behaviors under two conditions of threat to anonymity. Each subject in the pilot study was asked to write his or her name, address and phone number on a form attached to the questionnaire indicating willingness to participate in a

continuation of the study within the next few weeks. One group of subjects was asked for address and phone number on the initial consent form, and the other group found a separate page at the end of the questionnaire explaining the need for a second session and requesting name, address and phone number. A three digit number was marked on both the contact form and the main questionnaire to allow for matching subjects' responses from the first and second administration of the questionnaire (subjects in the pilot study were not actually contacted for the second session). If subjects were concerned about the lack of anonymity, it was expected that there would be fewer admissions to the behaviors for subjects who gave identifying information before filling out the questionnaire, and more subjects would decline to be recontacted after having admitted to the behaviors. No such differences were found, indicating that subjects were unaffected by threats to anonymity. In addition, the frequency of admission to the behaviors indicated that subjects were honestly reporting their own activities. About 66% of the subjects admitted to cheating at least once in the past year, 39% admitted to shoplifting at least once, and 57% admitted to lying to get out of a class assignment at least once. The percentages are lower than those obtained by Himmelfarb & Lickteig (1982) under the RRT (79% admitted to cheating; 68% admitted to shoplifting), but the self-reports in the present study were confined to behaviors in the past year, while the Himmelfarb & Lickteig items assessed behaviors over the subject's lifetime ("Have you ever cheated on a test?").

The results of the pilot study indicate that student subjects are relatively honest in reporting socially undesirable behaviors, even when aware that the experimenter could match their names with their responses to the questionnaire.

CHAPTER 2

STUDY 1

In Study 1, the validity of the theory of planned behavior in predicting intentions for socially undesirable behaviors is explored. In addition to the components of attitude, subjective norms and perceived behavioral control, a moral obligation component is hypothesized to contribute to prediction. Individual differences in reasoned action tendencies are assessed as potential moderators of the ability of the model to predict intention.

Methods

Subjects

A total of 146 college students (28 males, 118 females) were recruited through psychology courses to participate in Study 1. The subjects were between the ages of 17 and 30 ($M = 19.6$, 4 subjects did not report age).

Questionnaire

Subjects were recruited for a questionnaire study near the end of the fall semester. The questionnaire assessed the components of the theory of planned behavior (intentions, attitudes, subjective norms, perceived behavioral control), as well as moral obligation with regard to each behavior. Direct measures of each of the components were obtained, and specific behavioral, normative and control beliefs were also assessed, using results from the pilot study in which beliefs were elicited using open-ended questions. In addition, subjects were asked how many times they had performed each of the behaviors in the previous 12 months.

For the assessment of specific behavioral beliefs, separate measures were obtained for behavioral evaluation and belief strength. Each behavioral belief item (e.g. "My cheating on a test or exam will save study time") was scored on a scale of likely/unlikely ranging from 1 to 7. The corresponding behavioral evaluation item ("My saving study time is: good - bad") was scored on a seven point scale ranging from -3 to +3. There were eleven, seven, and ten belief-evaluation pairs for cheating, shoplifting, and lying, respectively. The scores for each pair of items were multiplied, and the products were summed, to obtain a belief-based measure of attitude toward the behavior.

Normative beliefs were also assessed by pairs of items representing a specific normative belief ("If I cheat on a test or exam, my parents would: not care/disapprove") and motivation to comply ("I care whether my parents approve or disapprove of my cheating on a test or exam - very much/not at all). Four item pairs for cheating and lying, and five pairs for shoplifting were scored from 1 to 7, multiplied, and summed.

Control beliefs were assessed using only one item for each belief ("In most of my exams, cheating is quite easy because I sit near friends - true/false) which was scored on a -3 to +3 scale and designed to measure beliefs about the situations that increase personal control over the behavior in question, as well as the likelihood that the situation will occur. For each of the three behaviors, eight control belief items were summed.

A direct measure of attitudes was obtained by summing each subject's responses to five evaluative semantic differential-type

adjective pairs placed on seven-point scales. Direct measures of subjective norms and perceived control were each measured by summed responses to four items for each behavior, and intention and moral obligation were each measured by summed responses to three items.

All of the items for a particular behavior were presented together, and the order in which the behaviors were presented was counterbalanced. Within each behavior section, the behavioral self-report item was presented before the predictor items for half of the subjects and after the predictor items for the other half, although the pilot study indicated no differences in rate of admissions to the behaviors with regard to placement of the self-report item. The direct measures for intention, subjective norms, and perceived control were interspersed among the other item sets, which were presented in the following order: attitudes, behavioral evaluations, behavioral beliefs, motivation to comply, normative beliefs, perceived control. The questionnaire items are organized for presentation in Appendix A.

Subjects also completed the Marlowe-Crowne Social Desirability Scale (SDS; Crowne & Marlowe, 1960; Appendix B), the Spontaneous and Reasoned Action Scales (SAS & RAS; Ajzen and Watters, 1988; Appendix C), the Need for Cognition Scale (NCS; Cacioppo & Petty, 1986; Appendix D), and the Eysenck Impulsiveness Scale (EIS; Eysenck & Eysenck, 1977; Appendix E). The four individual difference measures were counterbalanced, and always followed the predictor items.

Procedure

Subjects completed the questionnaires in groups of 20 to 50, near the end of the fall semester. Before filling out the

questionnaire, each subject completed a consent form which was coded with a three-digit number. The consent form also requested the subject's address and phone number as an indication of interest in participating in a continuation of the study which was to be conducted in the spring. Each subject returned the consent form before beginning the questionnaire, which was coded with the same three-digit number. Subjects were instructed not to put their names on the questionnaire itself, and that their responses would be kept anonymous.

Results

Alpha reliability of measures

Alpha reliability coefficients were obtained separately for each set of predictor items described above, and are presented in Table 1. Coefficients for the direct measures (intentions, attitudes, subjective norms, perceived control, moral obligation) ranged between .66 and .90, and between .51 and .85 for the sets of belief-based items. One attitude item and one general subjective norm item were dropped after initial reliability results showed poor item-total correlations for those items. (Closer examination indicated that the wording of the items may have been confusing to the subjects.)

Alpha reliability coefficients for the five individual difference scales ranged between .76 and .91. The SAS and RAS coefficients are based on 20 and 11 items respectively, chosen after a preliminary analysis to represent maximum internal consistency. No clear differences emerged between the four EIS subscales when

reliability and correlation analyses were performed on the separate subscales, so results for the combined scale only will be reported.

Table 1

Alpha reliability coefficients for original sample ($n = 146$)

	<u>Cheating</u>	<u>Shoplifting</u>	<u>Lying</u>
Intention	.87	.90	.85
Attitude	.81	.84	.85
Behavioral beliefs	.51	.52	.55
Subjective norms	.81	.73	.83
Normative beliefs	.79	.83	.85
Perceived behavioral control	.66	.78	.67
Control beliefs	.70	.79	.74
Moral obligation	.71	.78	.79
<u>Individual difference measures</u>			
Spontaneous action	.83		
Reasoned action	.76		
Impulsiveness	.81		
Need for cognition	.91		
Social desirability	.77		

Correlations between measures

Correlations between the direct and belief-based measures of the attitude, subjective norm, and perceived control components for each of the three behaviors are presented in Table 2. The attitude - behavioral belief and subjective norm - normative belief coefficients ranged between .53 and .67, while the perceived control - control belief coefficients for cheating, shoplifting and lying were .12 (not significant), .19, and .63, respectively. The items used to assess control beliefs may have been confusing to the subjects, and therefore responses to these items would be

Table 2

Correlations between direct and belief-based measures ($n = 146$)

	<u>Cheating</u>	<u>Shoplifting</u>	<u>Lying</u>
Attitudes - behavioral beliefs	.57*	.53*	.54*
Subjective norms - normative beliefs	.56*	.55*	.67*
Perceived control - control beliefs	.12	.19*	.63*

Note.— An (*) denotes significance ($p < .05$).

unreliable, causing the lower correlations. This possibility will be further explored in Study 2.

Table 3 displays the matrix obtained by intercorrelating all direct measures, as well as behavioral self-report for each of the three behaviors. All coefficients were significant, and ranged from .15 to .79. In keeping with the theory of planned behavior, intention is consistently the single best predictor of behavior.

Intercorrelations between the five individual difference measures are presented in Table 4. Surprisingly, spontaneous action is positively correlated with reasoned action, need for cognition, and social desirability. All of the other significant correlations are in the expected direction, but spontaneous action correlates positively with every other measure.

Test of the theory of planned behavior

Hierarchical regression analyses were performed to determine the pattern of prediction of intention by the direct measures of the components used in the study. (Previous studies have shown direct measures to be equivalent or better predictors of intention than belief-based measures.) Step 1 of the regression included the

Table 3

Intercorrelations between direct measures for original sample

Cheating

	I	Att	SN	PBC	MO
Intention	-				
Attitude	.67	-			
Subjective norm	.34	.46	-		
Perceived control	.79	.65	.37	-	
Moral obligation	.69	.64	.50	.66	-
Self-report of behavior	.69	.53	.20	.61	.52

Shoplifting

	I	Att	SN	PBC	MO
Intention	-				
Attitude	.78	-			
Subjective norm	.38	.50	-		
Perceived control	.79	.76	.39	-	
Moral obligation	.75	.71	.42	.61	-
Self-report of behavior	.74	.60	.25	.67	.52

Lying

	I	Att	SN	PBC	MO
Intention	-				
Attitude	.53	-			
Subjective norm	.37	.39	-		
Perceived control	.75	.52	.35	-	
Moral obligation	.74	.67	.42	.64	-
Self-report of behavior	.56	.33	.15	.48	.42

Note.-- All correlation coefficients are significant at the .05 level.

Table 4

Intercorrelations between individual difference scale scores

	<u>SA</u>	<u>RA</u>	<u>Imp</u>	<u>NC</u>
Spontaneous action	-			
Reasoned action	.35*	-		
Impulsiveness	.20*	-.45*	-	
Need for cognition	.28*	.37*	.02	-
Social desirability	.35*	.40*	-.12	.24*

Note.-- An (*) denotes significance ($p < .05$).

components of the theory of reasoned action: measures of attitudes and subjective norms. The perceived behavioral control component from the theory of planned behavior was added in Step 2, Step 3 added the moral obligation component, and the final step included self-report of past behavior. The results are shown in Table 5.

The results for Step 1 indicate that, for all three behaviors, subjective norm adds nothing to the prediction of intention beyond what attitude can predict alone. Low variance associated with this component would be expected to result in restricted correlations. However, the standard deviations for this component (column 1 of Table 7), while generally lower than those for other predictors, are

Table 5

Hierarchical regressions predicting intention ($n = 146$)

Cheating Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.67	.65*	
Subjective norm	.34	.04	.67
Step 2 - Theory of Planned Behavior			
Attitude	.67	.28*	
Subjective norm	.34	-.02	
Perceived behavioral control	.79	.62*	.82
Step 3 - Moral Obligation			
Attitude	.67	.21*	
Subjective norm	.34	-.08	
Perceived behavioral control	.79	.52*	
Moral obligation	.69	.26*	.84
Step 4 - Self-report of behavior			
Attitude	.67	.15*	
Subjective norm	.34	-.04*	
Perceived behavioral control	.79	.42*	
Moral obligation	.69	.20*	
Self-report of behavior	.69	.26*	.86

continued, next page

Table 5 (cont.)

Shoplifting Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.78	.78*	
Subjective norm	.38	-.01	.78
Step 2 - Theory of Planned Behavior			
Attitude	.78	.44*	
Subjective norm	.38	-.02	
Perceived behavioral control	.79	.46*	.83
Step 3 - Moral Obligation			
Attitude	.78	.25*	
Subjective norm	.38	-.05	
Perceived behavioral control	.79	.40*	
Moral obligation	.75	.34*	.87
Step 4 - Self-report of behavior			
Attitude	.78	.20*	
Subjective norm	.38	-.03	
Perceived behavioral control	.79	.25*	
Moral obligation	.75	.30*	
Self-report of behavior	.74	.30*	.89

Lying Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.53	.39*	
Subjective norm	.46	.26*	.57
Step 2 - Theory Planned Behavior			
Attitude	.53	.10	
Subjective norm	.46	.19*	
Perceived behavioral control	.75	.64*	.79
Step 3 - Moral Obligation			
Attitude	.53	-.05	
Subjective norm	.46	.08	
Perceived behavioral control	.75	.48*	
Moral obligation	.75	.42*	.83
Step 4 - Self-report of behavior			
Attitude	.53	-.06	
Subjective norm	.46	.10	
Perceived behavioral control	.75	.41*	
Moral obligation	.75	.38*	
Self-report of behavior	.56	.20*	.85

Note.-- An (*) denotes significance ($p < .05$).

not low enough to support this conclusion. Results for Step 2 indicate that, for cheating and lying, perceived behavioral control contributes substantially to prediction of intention (R increases from .67 to .82 and from .57 to .79). For shoplifting, perceived control contributes less to the prediction of intention (R increases from .78 to .83). Results for Steps 3 and 4, for all three behaviors, indicate that moral obligation and self-report of behavior contribute significantly, but not substantially, to the prediction of intention beyond the components of the model. The correlations between these components and intention are high, thus, low variance does not explain these results.

In addition, hierarchical regression analyses were carried out with past behavior as the dependent variable and intention and perceived control as predictors. This "postdiction" analysis was performed in order to provide for comparison with later prediction of future behavior in Study 2. Final multiple correlation coefficients for the three behaviors were .70, .76, and .57 (for cheating, shoplifting, and lying, respectively), and are displayed in Table 14. The perceived control component accounted for less than one percent of the variance in each postdiction analysis.

Individual difference measures

To test for moderating effects of the individual difference variables, hierarchical regression analyses were also performed separately for each interaction between the predictors of the theory of planned behavior and scores on the four individual difference measures. Moral obligation, self-report of behavior, and the score from the individual difference scale of interest were entered in

Step 3 of the regression, and the interaction term was entered in Step 4. For instance, the interaction between intention and impulsiveness was obtained by including the product of the two measures in the regression equation after the other predictors. Only one interaction term could be entered into the equation at a time, because the regression procedure was limited by substantial correlations between predictors.

Impulsiveness showed the greatest tendency to interact with the predictors, with nine out of 12 interactions significant: impulsiveness x attitude and impulsiveness x perceived control were significant for all three behaviors, impulsiveness x self-report interactions were significant for cheating and shoplifting, and the impulsiveness x subjective norms interaction was significant only for shoplifting.

Scores on the reasoned action scale showed significant interactions with subjective norms and behavioral self-reports for shoplifting, and with perceived control for lying. The spontaneous action scale showed a significant interaction only with behavioral self-report for shoplifting. There were no significant interactions with scores on the need for cognition scale.

To further examine the moderating effects of the individual difference measures, the original regression analyses were repeated twice for each measure, once using subjects scoring above the median for that measure, and again with subjects who scored below the median. The results confirm the expectation from the pattern of interactions obtained above that the impulsiveness scale is the most interesting and effective in this context, and Table 6 presents

Table 6

Multiple regression coefficients for subjects scoring high vs low on impulsiveness ($n = 73$)

	Impulsiveness	
	High	Low
<u>Cheating Intentions</u>		
Step 3 - TPB & Moral obligation	.80	.92
Step 4 - Self-report	.83	.92
<u>Shoplifting Intentions</u>		
Step 3 - TPB & Moral obligation	.84	.92
Step 4 - Self-report	.87	.93
<u>Lying Intentions</u>		
Step 3 - TPB & Moral obligation	.81	.87
Step 4 - Self-report	.83	.88

multiple correlation coefficients for subjects who scored high and low in impulsiveness. The intentions of subjects who scored low in impulsiveness tended to be more accurately predicted by the components of the theory of planned behavior and moral obligation than those who scored high in impulsiveness, while the median split groups for the other individual difference measures showed less consistent differences. For impulsiveness, the differences in predictability of intention were small (.92 vs .80, .92 vs .84, and .87 vs .81), but significant for cheating and shoplifting. When self-report was added as a final step in these analyses, it contributed slightly more to the final multiple R for subjects high on impulsiveness than for those who were low in impulsiveness (see Step 4 in Table 6). This difference may be due to a more direct

association between impulsiveness and actual behavior (by definition, impulsiveness should act independently of intention) or to a ceiling effect of the already high coefficients obtained for the low intention subjects.

Although impulsiveness appears to have some moderating effects, no firm conclusions can be drawn with regard to the effects of the other personality variables on the prediction of intention. Considering the high level of prediction of intention already obtained by the components of the theory of planned behavior, it is not surprising that individual difference measures add little predictive ability in this study.

Honesty of responding

Subjects' responses appeared to be relatively free from social desirability tendencies. The most obvious support for this claim comes from the high frequency and consistent reporting of socially undesirable behaviors. In response to the behavioral self-report questions on the questionnaire, 70% of the subjects admitted to having cheated at least once in the past year, 36% admitted to having shoplifted at least once, and 60% admitted to having used a false excuse to get out of taking a test or turning in an assignment on time. The frequencies of the admissions are quite similar to those obtained in the pilot study.

Further analyses were conducted to discover more subtle effects attributable to social desirability responding. The initial regression analyses were repeated with SDS score on the first step, in order to hold effects of social desirability constant. In this analysis, three to five percent of the variance was accounted for by

social desirability (significant for all three behaviors). More importantly, however, all effects reported previously remained essentially the same and significant after controlling for the effects of social desirability. The final multiple R values reached .86 to .90, vs .85 to .89 for the regressions without adding SDS.

When SDS score was entered into the regression analysis after the predictors of the theory of planned behavior, it contributed significantly to the prediction of intentions for shoplifting and lying. Interactions between SDS and subjective norms were significant for all three behaviors, and SDS x attitudes for cheating and SDS x self-report for lying were also significant.

Analyses on the two groups of subjects formed by a median split on SDS scores showed that, as might be expected, prediction of intentions was higher for subjects scoring high in social desirability responding (.91, .92, .86 for cheating, shoplifting and lying, respectively) than for those who scored low in social desirability responding (.80, .88, .82). However, these differences were significant only for cheating. Therefore, subjects scoring high on social desirability showed some tendency to respond more consistently than subjects with low social desirability tendencies, but these tendencies were minimal.

In order to assess the effects of the placement of the self-report item (at the beginning or end of each behavior section), and the sequence in which the behaviors were presented, 2 (order) x 3 (sequence) multivariate analyses of variance were performed on self-reports, intentions, attitudes, subjective norms, and perceived

control as dependent variables. There were no significant effects of questionnaire order or sequence on subjects' responses.

Discussion

The results of Study 1 show that social desirability factors had a small and relatively unimportant effect on the prediction of intentions using the theory of planned behavior. This, as well as the high rates of admission to the behaviors, suggest that subjects' responses to questionnaire items were relatively honest and appropriate as a criterion measure of behavior.

The most important finding in Study 1 is the strong relation between the predictors of the theory of planned behavior and intentions to perform the target behaviors. The theory of planned behavior appears to be no less effective in the prediction of intentions for socially undesirable behaviors - cheating, shoplifting and lying - than for other behaviors, as indicated by high multiple correlations comparable to those obtained in other tests of the model (e.g. Schifter & Ajzen, 1985; Ajzen & Madden, 1986). The subjective norm component was not useful as a predictor of intention. Subjective norms might have been expected to play a part considering the moral nature of the behaviors studied here, but this was not the case. Examination of the standard deviations associated with the measures of subjective norms rules out the possibility of restricted correlations due to low variance, so other explanations are needed to account for the lack of contribution of the subjective norm component. Because of the secretive nature of the target behaviors, subjects may often succeed in avoiding negative social consequences of their behavior. They believe that

such behaviors are generally looked down upon, but are not directly affected when their behaviors go undetected; it may be for this reason that ratings of norms are largely unrelated to actual behavior.

The perceived behavioral control component added substantially to the prediction of cheating and lying intentions, but less so to the prediction of shoplifting intentions, and very little to the postdiction of behavior. This may be simply a ceiling effect resulting from the large contributions of predictors entered earlier in the regression equation, or it may be a consequence of the type of behaviors studied here. This question will be explored further with results from Study 2.

Given the high proportion of variance already accounted for by attitudes and perceived behavioral control, it is not surprising that the moral obligation component did not substantially improve prediction of intention, although it did have a significant weight in the equation. The simple correlations between moral obligation and intention suggest that subjects were aware of and influenced by moral issues, but the results of the regression show that the theory of planned behavior was sufficient for the prediction of intention, even for socially undesirable behaviors. These results do not necessarily contradict those of Gorsuch and Ortberg (1983), whose regression equations did not include the perceived behavioral control component of the theory of planned behavior. Presumably, the proportion of variance accounted for by moral obligation in their moral situations would be closer to the that in the present study if the perceived control component had been included.

The pattern of intercorrelations among the individual difference measures showed an interesting inconsistency with regard to the spontaneous action measure. The results suggest that the SAS and RAS measures do not tap opposite tendencies, except in correlations with impulsiveness. In terms of improving prediction of intention, impulsiveness and social desirability show some usefulness as moderator variables. However, the degree of improvement was small and not consistently significant even for these. Since the prediction of intention from the components of the theory of planned behavior was already close to the maximum permitted by the reliability of the measures, the weak contribution of individual difference measures is not surprising.

CHAPTER 3

STUDY 2

Introduction

A basic assumption of the theory of planned behavior is that the best predictor of behavior is intention, which, in turn, can be predicted by attitudes, subjective norms and perceived behavioral control. Intention is the direct antecedent of behavior, and for behaviors under volitional control, intention leads to performance of the behavior. However, intentions may change over time as a result of changes in attitudes, subjective norms, or perceived control, so measures of intention obtained before the changes will have a weak relation to the ensuing behavior. Inconsistencies between intention and behavior may therefore be due to limitations in our ability to assess intention up to the moment the behavior is performed.

Despite these limitations, there are practical and theoretical reasons for wanting to predict behavior, rather than merely describe its correlates after the fact. The potential value of being able to predict behavior is illustrated by the topics of many previous studies in the domain of the theories of reasoned action and planned behavior, such as class attendance (Ajzen & Madden, 1986), voting choice (Ajzen & Fishbein, 1980), and tax evasion (Hessing et al. 1988). Theoretically, a model that only accounts for past behaviors may face the problem of confounding between self-reports of attitudes and behaviors due to the individual's motivation to appear consistent. Compared to explaining the relationship between current attitudes and past behavior, predicting behavior from prior

information is more problematic and therefore a more stringent test of the model.

In order to test the theory of planned behavior in prediction of future behavior, a second study was carried out. Subjects who had participated in Study 1 were recontacted five to six months later and returned to report on their behavior since the first questionnaire session. The ability of the measures taken at the first session to predict future behavior was then assessed. A strong relation between predictors and future behavior indicates the validity of the model for prediction as well as explanation.

Control subjects who did not fill out the initial questionnaire completed the second questionnaire at the same time as the "follow-up" subjects. Control subjects' responses were obtained to discover what, if any, effects the initial questionnaire had on responses to the second questionnaire. For instance, sensitization to issues regarding socially undesirable behavior may increase or decrease the probability that an individual will engage in such behavior, or admit to it. Similarly, the consistency of follow-up subjects' responses may be influenced by their prior experience with a similar questionnaire, so results for the two groups are compared.

The results of Study 1 showed only a limited effect of individual difference variables as moderators of intention. Perhaps stable dispositional factors cannot account for the variations in intention studied in this context, and more situationally determined variables have more influence. Therefore, Study 2 included measures of the individuals' involvement in each of the three issues.

There has been some evidence to show that reflection on one's attitudes and issue involvement improve the relation between attitudes and behavior. For instance, Snyder and Swann (1976) asked subjects in a mock jury to reflect on their attitudes toward affirmative action before delivering their verdicts in a discrimination case. The correlation between attitudes toward affirmative action and verdict was higher for those subjects than for subjects who did not reflect on their attitudes. Further evidence for the moderating influence of reflection has been inconsistent, however. Wilson et al. (1984) showed the opposite effect of reflection in three studies, as did Wilson and Dunn (1986). Evidence for the effects of issue involvement (or vested interest) has been more uniform. Studies by Sivacek and Crano (1982), Regan and Fazio (1977), and Fazio and Zanna (1978) support the notion that involvement improves attitude-behavior consistency. In order to test for these effects in the present context, measures of "importance" were included in Study 2.

The individual difference measures that were relatively successful as moderating variables in Study 1, impulsiveness and social desirability, were included in Study 2. Although these measures did not show substantial moderating effects for the prediction of intention, they may be more relevant to the prediction of actual behavior, especially impulsiveness, which is more directly related to behavior than to intention.

Methods

Subjects

Subjects who had participated in Study 1 and indicated that they would be willing to participate in a follow-up study were recontacted the next semester for Study 2. Many of those contacted were not currently enrolled in psychology classes, and therefore were not interested in earning an experimental credit for participating in a psychology study.

Of the subjects who had participated in Study 1, 34 returned for the second phase. Forty-six control subjects who had not completed the first questionnaire were also recruited.

Materials

The follow-up questionnaire consisted of the same direct measures of intention, attitude, subjective norms, perceived control, and moral obligation as on the initial questionnaire, and excluded belief-based questions for the attitude and subjective norm components. The self-report items for each behavior assessed behaviors performed "in the past six months" in order to limit the subjects' reports to performance since Study 1. Two new items were included in the Study 2 questionnaire measuring the importance of the behaviors for the subject (e.g. "Whether or not I take something from a store without paying is an important issue for me - true/false"). One item measuring thought was also included ("I have thought a lot about cheating. . ."). The general predictor items and the importance items were scored on scales from 1 to 7.

Control belief assessment items from the first questionnaire were modified in order to separate the belief and control values.

Confusion in responding to the combined items may have been responsible for the low correlations between control beliefs and direct measures of perceived control in Study 1. Therefore, an item from Study 1 such as "In most of my tests or exams, cheating is quite easy because I sit near friends - true/false" was changed to two items: "I usually sit near friends in most of my tests or exams - true/false" and "Sitting near friends during a test or exam makes cheating - easy/difficult". The control belief items were scored from 1 to 7. Study 2 importance and control items are organized for presentation in Appendix F.

As in Study 1, questionnaire order was counterbalanced with regard to presentation of the three behaviors, and the self-report items were located at the beginning of each behavior section for half of the subjects and at the end of each section for the other half. Precautions for anonymity were again carried out, with returning subjects receiving questionnaires bearing the same 3-digit number as on their first questionnaire, and control subjects receiving questionnaires coded with a different series of digits. Subjects' names did not appear on the questionnaires.

In addition to the questionnaire, control subjects also completed the Marlowe-Crowne Social Desirability Scale and the Eysenck Impulsiveness Scale. Returning subjects from Study 1 did not complete the SDS and EIS.

Results

Reanalysis of Study 1 data for only the subjects who later returned for the continuation study showed that the 34 subjects were representative of the entire sample. The new sample was composed of

24% males (compared to 19% in the initial sample), and the mean age for the 34 subjects was 20.0 years (compared to 19.6) at the time of first testing. Self-reports of behavior for cheating, shoplifting and lying in the select sample at Time 1 were slightly lower than for the entire sample (56%, 32%, and 47% respectively, compared to 66%, 39% and 57%). Self-reports from the select sample at Time 2 equaled 47% for cheating, 29% for shoplifting, and 21% for lying. In the control group, 48% admitted to cheating, 20% to shoplifting, and 40% to lying to get out of a class assignment. The Time 2 behavioral admissions are quite a bit lower than those from Time 1 subjects, but the Time 2 questionnaire only asked for self-reports of behaviors in the past 6 months, where the original questionnaire had asked for self-reports in the past year.

Mean responses and standard deviations for the general predictor items for the Time 1 subjects, the 34 returning subjects at both Time 1 and Time 2, and the Time 2 control subjects are listed in Table 7. Comparison of the means shows no sizable or systematic differences across the four groups.

Reliability

Test-retest reliability coefficients for each of the predictors of the model were obtained for responses from the 34 subjects on the first and second questionnaire. Reliability coefficients ranged from .53 to .83, with a median of .68; they are reported in Table 8.

Alpha reliability coefficients for intentions, attitudes, subjective norms, perceived control, and moral obligation on the Study 2 questionnaire ranged from .72 to .92 for the 34 returning subjects, and between .58 and .90 for the same 34 subjects in Study

Table 7

Comparison of means (standard deviations) for main predictor items

Cheating

	Original sample	Select sample		Control sample
		Time 1	Time 2	
Self-report	1.74 (1.7)	1.44 (1.7)	.97 (1.5)	.83 (1.2)
Intention	10.30 (5.4)	9.26 (5.8)	8.62 (5.5)	9.59 (5.0)
Attitude	11.24 (5.5)	10.21 (5.9)	9.38 (5.0)	10.22 (5.2)
Subjective norm	8.43 (4.4)	8.76 (4.7)	7.76 (4.5)	8.35 (4.7)
Perceived control	15.10 (5.7)	13.38 (5.9)	12.97 (5.7)	14.22 (5.0)
Moral obligation	7.70 (4.4)	7.12 (4.0)	7.11 (3.9)	7.02 (4.5)

Shoplifting

	Original sample	Select sample		Control sample
		Time 1	Time 2	
Self-report	.99 (1.7)	1.00 (1.9)	.82 (1.6)	.54 (1.2)
Intention	7.89 (5.7)	7.21 (5.5)	7.88 (4.7)	8.00 (5.2)
Attitude	9.54 (5.5)	9.52 (5.8)	9.79 (5.2)	9.46 (4.5)
Subjective norm	6.52 (3.9)	7.06 (4.2)	6.67 (4.4)	6.74 (4.2)
Perceived control	12.00 (6.5)	10.94 (7.0)	10.65 (6.1)	12.78 (6.6)
Moral obligation	6.11 (4.3)	6.18 (4.3)	6.18 (4.0)	5.74 (3.9)

Lying

	Original sample	Select sample		Control sample
		Time 1	Time 2	
Self-report	1.36 (1.6)	.97 (1.5)	.53 (1.2)	.84 (1.3)
Intention	11.50 (5.4)	9.06 (4.5)	9.50 (4.9)	10.70 (5.5)
Attitude	15.03 (6.1)	13.94 (6.3)	13.23 (5.4)	14.78 (5.9)
Subjective norm	10.84 (4.9)	10.33 (4.9)	11.00 (5.4)	10.56 (5.2)
Perceived control	16.20 (5.7)	14.90 (6.9)	14.74 (5.9)	16.59 (5.4)
Moral obligation	9.22 (4.9)	8.06 (4.5)	9.53 (5.0)	9.59 (4.9)

Note.-- Self-report data for the select sample at Time 2 and the control sample are based on the past 6 months. Self-reports for the Time 1 and original sample are based on the past 12 months.

Table 8

Test-retest reliability coefficients for select sample ($n = 34$)

	Cheating	Shoplifting	Lying
Self-report	.74	.67	.68
Intention	.83	.72	.72
Attitude	.60	.66	.62
Subjective norm	.63	.60	.53
Perceived control	.70	.72	.73
Moral obligation	.68	.75	.75

1. Reliabilities for control belief items were .21, .68 and .65 for cheating, shoplifting, and lying, respectively. Alpha reliability coefficients for the two importance items ranged from .69 to .92.

Alpha reliability coefficients for the 46 control subjects ranged between .55 and .88 for the sets of predictor items, between .14 and .53 for the sets of control belief items, and between .23 and .68 for the two importance items. Alpha coefficients for the select sample at both Time 1 and Time 2, and for the control subjects at Time 2 are reported in Table 9.

Correlations

Intercorrelations between the predictor items were carried out for the 34 returning subjects at Time 1 and Time 2, and for the control subjects. These correlations appear to be relatively stable across the three groups, with some exceptions listed below.

Correlation coefficients are presented in Table 10.

In keeping with the theory of planned behavior, intention was the best predictor of behavioral self-report for all three behaviors, except for the Time 2 returning and control subjects

Table 9

Alpha reliability coefficients for select and control samples

Cheating

	Time 1	Time 2	Control
	<hr/>	<hr/>	<hr/>
Intention	.90	.90	.84
Attitude	.87	.79	.77
Subjective norm	.88	.91	.82
Perceived control	.68	.71	.55
Moral obligation	.58	.71	.80
Control beliefs	.58	.21	.53
Importance	-	.75	.23

Shoplifting

	Time 1	Time 2	Control
	<hr/>	<hr/>	<hr/>
Intention	.90	.75	.86
Attitude	.84	.79	.57
Subjective norm	.79	.92	.78
Perceived control	.87	.76	.73
Moral obligation	.71	.87	.86
Control beliefs	.77	.67	.43
Importance	-	.92	.68

Lying

	Time 1	Time 2	Control
	<hr/>	<hr/>	<hr/>
Intention	.70	.80	.88
Attitude	.87	.72	.80
Subjective norm	.88	.91	.86
Perceived control	.86	.75	.64
Moral obligation	.75	.85	.66
Control beliefs	.79	.65	.14
Importance	-	.69	.57

Note.-- Control belief reliabilities are based on summed items for Time 1 data and on summed belief x evaluation products for Time 2 and Control subjects.

Table 10

Intercorrelations between direct measures for select ($n = 34$) and control ($n = 46$) samplesCheating

	<u>Select sample</u>						<u>Control</u>					
	<u>Time 1</u>			<u>Time 2</u>			<u>Time 1</u>			<u>Time 2</u>		
	I	Att	SN	PBC	MO		I	Att	SN	PBC	MO	
Intention	—						—					
Attitude	.79	—					.67	—				
Subjective norm	.51	.67	—				.48	.41	—			
Perceived control	.85	.69	.50	—			.64	.53	.52	—		
Moral obligation	.73	.62	.50	.67	—		.73	.65	.43	.59	—	
Self-report	.81	.51	.22*	.63	.67		.70	.32	.54	.47	.64	

Shoplifting

	<u>Select sample</u>						<u>Control</u>					
	<u>Time 1</u>			<u>Time 2</u>			<u>Time 1</u>			<u>Time 2</u>		
	I	Att	SN	PBC	MO		I	Att	SN	PBC	MO	
Intention	—						—					
Attitude	.75	—					.69	—				
Subjective norm	.39	.55	—				.49	.43	—			
Perceived control	.87	.81	.54	—			.75	.65	.42	—		
Moral obligation	.74	.76	.33	.64	—		.77	.66	.54	.67	—	
Self-report	.77	.46	.11*	.73	.44		.54	.40	.47	.52	.56	

Lying

	<u>Select sample</u>						<u>Control</u>					
	<u>Time 1</u>			<u>Time 2</u>			<u>Time 1</u>			<u>Time 2</u>		
	I	Att	SN	PBC	MO		I	Att	SN	PBC	MO	
Intention	—						—					
Attitude	.55	—					.66	—				
Subjective norm	.39	.53	—				.37	.46	—			
Perceived control	.73	.50	.30	—			.23*	.13*	.36	—		
Moral obligation	.77	.75	.51	.66	—		.76	.64	.43	.16*	—	
Self-report	.50	.14*	-.03*	.39	.47		.57	.20*	.19*	.44	.30	

Note.— An (*) denotes nonsignificant correlations.

responses for shoplifting. In both of these cases, the moral obligation component was most highly correlated with self-report.

The data also show a tendency for the subjective norms component to be unrelated to the other predictors. This tendency is especially pronounced for the returning subjects at Time 2, and for lying.

Multiple regression

Multiple regression analyses were performed on the data from the 34 follow-up subjects to confirm the effectiveness of the theory of planned behavior in predicting intention. Because of the small number of subjects in Study 2, only two steps were included in the regressions. Step 1 included attitudes and subjective norms as a test of the theory of reasoned action, and Step 2 added perceived behavioral control to test the theory of planned behavior. The results of these analyses for the three behaviors are reported in Table 11.

For shoplifting and lying, the addition of the perceived control component substantially improved prediction of intention (R increased from .73 to .84 and from .74 to .86). Perceived control did not provide a substantial increase in prediction for cheating (R increased from .79 to .81). The multiple R 's obtained after entering the components of the theory of planned behavior in Study 2 (.81, .84, .86) are comparable to those obtained in Step 2 of Study 1 (.82, .83, .79).

Final multiple regression coefficients for the control group in Study 2 were also high: .75, .81 and .79 for cheating, shoplifting and lying, respectively (Table 12). Perceived behavioral control

Table 11

Hierarchical regression analysis for select sample at Time 2 ($N=34$)Cheating Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.78	.77*	
Subjective norm	.16	.12	.79
Step 2 - Theory of Planned Behavior			
Attitude	.78	.55*	
Subjective norm	.16	.10	
Perceived behavioral control	.72	.30	.81

Shoplifting Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.70	.70*	
Subjective norm	.20	.19	.73
Step 2 - Theory of Planned Behavior			
Attitude	.70	.26	
Subjective norm	.20	.13	
Perceived behavioral control	.81	.61*	.84

Lying Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.74	.73*	
Subjective norm	.31	.02	.74
Step 2 - Theory of Planned Behavior			
Attitude	.74	.48*	
Subjective norm	.31	-.01	
Perceived behavioral control	.76	.52*	.86

Note.— An (*) denotes significance ($p < .05$).

Table 12

Hierarchical regression analysis for control sample ($n=46$)Cheating Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.67	.57*	
Subjective norm	.48	.24*	.71
Step 2 - Theory of Planned Behavior			
Attitude	.67	.44*	
Subjective norm	.48	.12	
Perceived behavioral control	.64	.34*	.75

Shoplifting Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.69	.59*	
Subjective norm	.49	.23	.72
Step 2 - Theory of Planned Behavior			
Attitude	.69	.30*	
Subjective norm	.49	.15	
Perceived behavioral control	.75	.49*	.81

Lying Intentions

	r	b	R
Step 1 - Theory of Reasoned Action			
Attitude	.66	.62*	
Subjective norm	.37	.09	.66
Step 2 - Theory of Planned Behavior			
Attitude	.66	.40*	
Subjective norm	.37	.04	
Perceived behavioral control	.70	.50*	.79

Note.-- An (*) denotes significance ($p < .05$).

made a significant contribution in each case. Therefore, Study 2 supports the evidence obtained in Study 1 that the theory of planned behavior is sufficient for the prediction of intention.

The prediction of actual behavior was assessed by hierarchical regressions in which the 34 follow-up subjects' Time 2 self-reports of behavior since the first questionnaire were regressed onto their Time 1 reports of intention and perceived control. In other words, intentions and perceived control at Time 1 were used to predict subsequent behavior. The results of this analysis are reported in Table 13. The best prediction was obtained for cheating (final multiple $R = .74$), while the variance in shoplifting and lying was accounted for in much smaller degrees (final multiple R 's = .47 and .35, respectively). This may be at least partly due to the relative instability of self-reports and intentions for shoplifting and lying. While self-reports of cheating had a test-retest reliability coefficient of .74, the other two behaviors had reliabilities of .67 and .68 for shoplifting and lying, respectively. Test-retest correlations of intentions were .83 for cheating, and .72 for both shoplifting and lying. In order to compare the regression coefficients without reliability limitations, the intention - self-report correlations were corrected for attenuation, resulting in correlations of .95, .67, and .50 for cheating, shoplifting and lying. Even when the effects of reliability are controlled, differences in the intention - self-report relation are still substantial. This suggests that, for the most part, differences in the prediction of self-report are due to factors other than reliability limitations.

For predicting the behaviors at Time 2, perceived behavioral control made no significant contributions, indicating that this component was already included in intention, or that it was not

Table 13

Hierarchical regression analysis: Prediction of Time 2 behavior from Time 1 intention and perceived control ($n=34$)

Self-report of cheating			
	r	b	R
Step 1			
Intention			
Step 2	.74	.74*	.74
Intention	.74	.65*	
Perceived behavioral control	.66	.11	.74
Self-report of shoplifting			
	r	b	R
Step 1			
Intention			
Step 2	.47	.47*	.47
Intention	.47	.43	
Perceived behavioral control	.42	.05	.47
Self-report of lying			
	r	b	R
Step 1			
Intention			
Step 2	.35	.35*	.35
Intention	.35	.30	
Perceived behavioral control	.29	.08	.35

Note.-- An (*) denotes significance ($p < .05$).

sufficiently related to actual control to contribute to prediction. Similarly, perceived control did not consistently account for variance in past behavior.

"Postdiction" analyses were conducted using Time 2 predictor measures and self-report of past behavior (see Table 14). For the returning group, final multiple regression coefficients were .85, .68, and .50 for cheating, shoplifting and lying, respectively.

Table 14

Regression coefficients for postdiction analyses on original ($n = 146$), select ($n = 34$), and control ($n = 46$) samples

Original sample

Self-report

	Cheating	Shoplifting	Lying
Intention	.69	.74	.56
Perceived behavioral control	.70	.76	.57

Select Sample - Time 1

Self-report

	Cheating	Shoplifting	Lying
Intention	.81	.77	.50
Perceived behavioral control	.82	.77	.50

Select sample - Time 2

Self-report

	Cheating	Shoplifting	Lying
Intention	.83	.59	.50
Perceived behavioral control	.85	.68	.50

Control sample

Self-report

	Cheating	Shoplifting	Lying
Intention	.70	.54	.57
Perceived behavioral control	.70	.56	.57

Note.-- Intention was entered in Step 1 of the regression equation, and perceived control was entered in Step 2.

Perceived behavioral control contributed significantly to reports of cheating and shoplifting behaviors (accounting for 4% and 11% of the variance). For the control group, final coefficients were .70, .56 and .57. Perceived behavioral control made no significant contributions in this group. Study 1 postdiction analyses, it will be recalled, showed a significant contribution of perceived control (accounting for 2% of the variance) for shoplifting, and no significant effects for the other two behaviors.

Control Beliefs

The summed products of the reworded control belief items showed generally higher reliability compared to the original items in Study 1, but the pattern of reliability coefficients indicates some instability. Alpha reliability for cheating control beliefs was .21 for the 34 returning subjects, and .53 for the control subjects. Conversely, reliability for the lying items was .65 for the returning subjects and .14 for the control subjects. The correlations between the control belief products and the sum of the four general perceived control items ranged between $-.15$ and $.55$ for the returning subjects, and between $.01$ and $.27$ for the control group. In order to verify that these inconsistencies were all attributable to problems with the specific belief items, and not to the general items, multiple regression analyses were performed using the summed control belief products in place of the general perceived control items in predicting intention. The results confirmed that the general perceived control items were more useful in predicting intention than the specific beliefs.

Individual difference measures

Hierarchical regression analyses predicting intention from attitude, subjective norms, and perceived control were performed separately for subjects above and below the median on the impulsiveness and social desirability scales. No consistent patterns were observed in the regressions for control subjects or for the 34 Time 1 subjects who later returned for the follow-up. Similarly, no consistent patterns emerged when regressions predicting Time 2 self-reports from Time 1 intentions and perceived control were performed on the median split groups. The instability of these effects in the prediction of intention is not too surprising in light of the small effects that were observed for these measures originally. More surprisingly, the expectation that impulsiveness would have a more substantial effect on actual behavior was not supported by the results of the prediction of self-reports.

In order to test for moderating effects of importance and thought on the prediction of intention and behavior, separate regressions were performed for subjects who were above and below the median on these measures, predicting intention for the control and follow-up data, and predicting Time 2 self-report from the initial data of the follow-up subjects. There were no clear patterns of differences in prediction of intention for subjects who scored above and below the median on involvement and amount of thought. However, in the control group, prediction of intention was significantly improved with low scores on importance, for cheating and shoplifting.

Discussion

The results of Study 2 indicate that intention can predict future undesirable behavior, especially cheating. Shoplifting and lying were less well predicted over a six month period. Self-report and intention retest reliability coefficients for these two behaviors were slightly lower than for cheating, indicating that the behaviors themselves may be less stable, and that intentions of performing the behaviors changed more for shoplifting and lying than for cheating. The small differences in reliability did not fully account for the larger differences in prediction, however. Other factors such as opportunity may have played an important role in the performance of the behaviors - perhaps subjects have difficulty judging in advance whether the opportunity, need, or desire to shoplift or lie to a teacher will occur. Perceived behavioral control did not contribute to the prediction of future behavior, or to postdiction of past behavior, indicating that this factor had been fully accounted for in the intention component, and did not provide further information about actual control.

Control beliefs were examined more closely in this study than in Study 1, yet were still found to be less reliable than other components, and inconsistently related to general reports of perceived control. This instability, also observed in Study 1, may represent an important and interesting difference between socially undesirable behaviors and the more acceptable behaviors previously studied. Apparently, specific control beliefs are not as important with regard to these behaviors or their components as might be expected. It is possible that in sampling control beliefs in the

pilot study, subjects were responding to situational demands in reporting beliefs, although such beliefs were not important with regard to actual cheating behavior. Specific control beliefs may have been overshadowed by attitudes and general perceptions of control for these behaviors. Alternatively, the behaviors studied here may be constrained by very specific situational factors, interacting in ways that are difficult to measure. This supposition seems improbable given the high rate of performance of the behaviors, but there is a possibility that each instance of a behavior is marked by a different set of control factors.

No consistent moderating effects of individual difference variables (impulsiveness and social desirability), or secondary attitude characteristics (importance and thought) were found in this study. The effects of importance on prediction of intentions for cheating and shoplifting in the control group, however, are significant, and in the opposite direction to that expected, given previous research findings (e.g. Sivacek & Crano, 1982) which suggest that increased involvement should improve attitude-behavior consistency. Despite this inconsistency, the results reported here are so unstable (occurring only for two behaviors in the control group) that they pose little threat to the conclusion that involvement usually improves prediction. The results from the analyses of importance and thought, as well as the other individual difference variables point instead to the robust prediction of intention and self-report that is achieved by the theory of planned behavior.

CHAPTER 4

GENERAL DISCUSSION

Summary

Study 1 demonstrated the utility of the theory of planned behavior in accounting for intentions to engage in socially undesirable behaviors. While the subjective norms component did not contribute significantly to the prediction of intention, moral obligation received a significant weight in the prediction of intention, but added little to the variance already accounted for by the components of the theory of planned behavior. Individual difference measures related to tendencies toward reasoned and spontaneous action were found to have minimal or no moderating effect on prediction.

The main emphasis of Study 2 was on the prediction of actual behavior, and the findings indicated a significant relationship between intention and behavior over a six month period. Perceived control did not contribute to behavioral prediction, and contributed only minimally to postdiction.

For all Study 1 subjects and for follow-up subjects and new (control) subjects in Study 2, attitude and perceived behavioral control accounted for nearly all of the reliable variance of intentions to cheat, shoplift, and lie. The subjective norms component was uniformly ineffective in predicting intention throughout both studies. In the most stringent test of the theory, intention at Time 1 was highly correlated with behavior reported at Time 2 for cheating ($R = .74$). Although the prediction was substantially less for shoplifting and lying, (R 's = .47 and .35),

these results are nevertheless statistically significant and indicate the potential practical importance for predicting dishonest behavior.

Perceived Control

The findings raise an interesting question regarding the lack of relation between control beliefs and the other components predicting intention and socially undesirable behavior. Further investigation may reveal the nature of this inconsistency, and confirm the role of specific control beliefs. Salient control beliefs for these behaviors may vary widely across individuals, in which case it may be necessary to elicit each subject's beliefs separately. Alternatively, specific control beliefs may prove to be almost unrelated to intentions to perform socially undesirable behaviors, as individuals who perform the behaviors may ignore or suppress cognitive estimations of their control in immoral or illegal situations.

Another possible explanation of the instability of the control beliefs and the lack of contribution of the perceived control component lies in the hypothesis discussed earlier, that shoplifters (and possibly cheaters and liars as well) perceive deterrent measures as challenges (Weaver & Carroll, 1985). Related to this notion, there is evidence that criminals perceive an optimal level of risk, and levels of risk above or below this level decrease their desire to commit the act (Kallis & Vanier, 1985). This implies a curvilinear relationship between risk perceptions and intention for experienced cheaters, shoplifters, and liars, which may affect the predictive ability of the perceived control component.

Following this reasoning, the differences in prediction of self-reports of the three behaviors in this study may be due to subjects' differing abilities to foresee situations in which they would be likely to perform each behavior. Shoplifting and lying behaviors may depend largely on perceptions of risk and opportunity that cannot be evaluated until the situation arises. On the other hand, cheating takes place in a generally predictable environment, and subjects may be able to predict their cheating behavior ahead of time. The motivation to perform under a certain amount of risk may not apply for cheating behaviors perhaps because it is generally easy to avoid detection while cheating, or because cheating is not generally associated with criminal charges as in shoplifting, or with direct social interaction as in lying to a professor.

Implications

The present studies indicate that the theory of planned behavior provides a useful means of predicting socially undesirable behavior. The results have implications for numerous issues involving undesirable behavior, such as the development of persuasive communications, but are most directly applicable to issues of behavioral prediction, such as the current problem in honesty testing for employment.

Since the recent federal ban on polygraph pre-employment testing, many employment screening professionals are turning to paper and pencil integrity tests to predict undesirable behavior such as stealing and drug use in potential employees (Bales, 1988). Suspicions of unsound methodology and invalidity of many of these tests have led to concerns among the psychological community, and

paper and pencil integrity test prohibitions have been added to anti-polygraph laws in Massachusetts and Rhode Island and are being considered in other states. While it is prudent to restrict the use of invalid or untested scales, especially in making important decisions, there is a need for valid prediction of undesirable behavior in the workplace. Instead of lobbying for more restrictions on honesty testing, psychologists should begin to take a practical interest in employment screening issues. The research reported above is an initial indication of a solution to the problem of predicting employees' undesirable behaviors. Translating the theory of planned behavior into an appropriate format for pre-employment screening, would require a means of overcoming problems of dishonest responding which were negligible in the nonthreatening situation of the present studies. The application of advances in behavioral prediction to more practical problems is still out of reach, but the research reported here represents an initial step in that direction.

APPENDIX A

STUDY 1 QUESTIONNAIRE ITEMS

Cheating Items

Introduction

Most college students are familiar with the concept of cheating. There are many ways to cheat, and cheating occurs in many situations. We are interested in your feelings about cheating on tests or exams. Please answer each question honestly. Remember, your responses are anonymous.

Self-report

In the last 12 months, how many times have you cheated on a test or exam? (circle one)

never once twice 3 times 4 times 5 times more than 5
times

Attitude

For me, cheating on a test or exam is

good	1	2	3	4	5	6	7	bad
pleasant	1	2	3	4	5	6	7	unpleasant
wise	1	2	3	4	5	6	7	foolish
useful	1	2	3	4	5	6	7	useless
attractive	1	2	3	4	5	6	7	unattractive
harmful	1	2	3	4	5	6	7	beneficial

Intention

If I had the opportunity, I would cheat on a test or exam.

true 1 2 3 4 5 6 7 false

I would never cheat on a test or exam.

true 1 2 3 4 5 6 7 false

I may cheat on some of my tests or exams in the future.

true 1 2 3 4 5 6 7 false

Subjective Norms

If I cheat on a test or exam most of the people who are important to me would

not care 1 2 3 4 5 6 7 disapprove

No one who is important to me would think it is ok for me to cheat on a test or exam.

agree 1 2 3 4 5 6 7 disagree

Most of the people who are important to me think it is ok for me to cheat on a test or exam.

likely 1 2 3 4 5 6 7 unlikely

Most of the people who are important to me will look down on me if I cheat on a test or exam.

likely 1 2 3 4 5 6 7 unlikely

Perceived Behavioral Control

For me to cheat on a test or exam is

easy 1 2 3 4 5 6 7 difficult

If I want to, I can cheat on a test or exam.

true 1 2 3 4 5 6 7 false

I can imagine times when I would cheat on a test or exam even if I hadn't planned to.

likely 1 2 3 4 5 6 7 unlikely

Even if I had a good reason, I could not bring myself to cheat on a test or exam.

likely 1 2 3 4 5 6 7 unlikely

Moral Obligation

I would not feel guilty if I cheated on a test or exam.

true 1 2 3 4 5 6 7 false

Cheating on a test or exam goes against my principles.

likely 1 2 3 4 5 6 7 unlikely

It would be morally wrong for me to cheat on a test or exam.

likely 1 2 3 4 5 6 7 unlikely

Behavioral evaluation

My getting a good grade on a test or exam is

good 1 2 3 4 5 6 7 bad

Learning my class material is

good 1 2 3 4 5 6 7 bad

Hurting my future career is

good 1 2 3 4 5 6 7 bad

My saving study time is

good 1 2 3 4 5 6 7 bad

My getting into the habit of cheating is

good 1 2 3 4 5 6 7 bad

My getting caught cheating on a test or exam is

good 1 2 3 4 5 6 7 bad

Forgetting something I studied during a test or exam is

good 1 2 3 4 5 6 7 bad

My passing a course instead of failing is

good 1 2 3 4 5 6 7 bad

Losing confidence in my abilities is

good 1 2 3 4 5 6 7 bad

Getting a better grade than I deserve is

good 1 2 3 4 5 6 7 bad

Checking whether my answers on a test or exam are correct is

good 1 2 3 4 5 6 7 bad

Behavioral Beliefs

If I cheat on a test or exam, I will get a better grade.	likely	1	2	3	4	5	6	7	unlikely
If I cheat on a test or exam, I will not learn class material.	likely	1	2	3	4	5	6	7	unlikely
My cheating on a test or exam will hurt my future career.	likely	1	2	3	4	5	6	7	unlikely
My cheating on a test or exam will save study time.	likely	1	2	3	4	5	6	7	unlikely
Cheating on a test or exam could become a habit.	likely	1	2	3	4	5	6	7	unlikely
If I cheat on a test or exam I might get caught.	likely	1	2	3	4	5	6	7	unlikely
Cheating on a test or exam could help me recall something I forgot.	likely	1	2	3	4	5	6	7	unlikely
Cheating on a test or exam can help me pass a course instead of failing.	likely	1	2	3	4	5	6	7	unlikely
If I cheat on a test or exam I will lose confidence in myself.	likely	1	2	3	4	5	6	7	unlikely
If I cheat on a test or exam I will get a better grade than I deserve.	likely	1	2	3	4	5	6	7	unlikely
By cheating on a test or exam I can check whether my answers are correct.	likely	1	2	3	4	5	6	7	unlikely

Motivation to comply

I care whether my classmates approve or disapprove of my cheating on a test or exam.	very much	1	2	3	4	5	6	7	not at all
I care whether my parents approve or disapprove of my cheating on a test or exam.	very much	1	2	3	4	5	6	7	not at all
I care whether my professor approves or disapproves of my cheating on a test or exam.	very much	1	2	3	4	5	6	7	not at all
I care whether my friends approve or disapprove of my cheating on a test or exam.	very much	1	2	3	4	5	6	7	not at all

Normative Beliefs

If I cheat on a test or exam, most of my classmates would	not care	1	2	3	4	5	6	7	disapprove
If I cheat on a test or exam, my parents would	not care	1	2	3	4	5	6	7	disapprove
If I cheat on a test or exam, my professor would	not care	1	2	3	4	5	6	7	disapprove
If I cheat on a test or exam, most of my friends would	not care	1	2	3	4	5	6	7	disapprove

Control beliefs

In most of my tests or exams, people are sitting closely enough together so that I could cheat if I wanted to.

true 1 2 3 4 5 6 7 false

The amount of supervision in most of my tests or exams makes it hard for me to cheat.

true 1 2 3 4 5 6 7 false

In most of my tests or exams, the class size would make it easy for me to cheat.

true 1 2 3 4 5 6 7 false

The respect I have for most of my professors would make it hard for me to cheat on a test or exam.

true 1 2 3 4 5 6 7 false

In most of my tests or exams, the test forms used make it harder to cheat.

true 1 2 3 4 5 6 7 false

In most of my tests or exams, cheating is quite easy because I sit near friends.

true 1 2 3 4 5 6 7 false

In most of my tests or exams, it is easy to cheat because the professor doesn't care.

true 1 2 3 4 5 6 7 false

In most of my test or exams, it is easy to cheat because books or papers are left out.

true 1 2 3 4 5 6 7 false

Shoplifting Items

Introduction

Taking something from a store without paying for it is an interesting behavior about which little is known. We would like to find out how people feel about taking something from a store without paying. Please answer each question honestly. Remember, your responses are anonymous.

Self-report

In the last 12 months, how many times have you taken something from a store without paying? (circle one)

never once twice 3 times 4 times 5 times more than 5 times

Behavioral evaluation

My saving money is

good 1 2 3 4 5 6 7 bad

Getting something I need and can't afford is

good 1 2 3 4 5 6 7 bad

My doing something exciting is

good 1 2 3 4 5 6 7 bad

My getting into the habit of taking something from a store without paying is

good 1 2 3 4 5 6 7 bad

My outsmarting store owners and employees is

good 1 2 3 4 5 6 7 bad

My getting caught taking something from a store without paying is

good 1 2 3 4 5 6 7 bad

My causing prices of merchandise to rise is

good 1 2 3 4 5 6 7 bad

Behavioral Beliefs

If I take something from a store without paying I will save money.

likely 1 2 3 4 5 6 7 unlikely

If I take something from a store without paying I can get something I need and would not be able to afford otherwise.

likely 1 2 3 4 5 6 7 unlikely

Taking something from a store without paying could be exciting.

likely 1 2 3 4 5 6 7 unlikely

Taking something from a store without paying could become a habit.

likely 1 2 3 4 5 6 7 unlikely

If I take something from a store without paying, I would outsmart the store owners and employees.

likely 1 2 3 4 5 6 7 unlikely

If I take something from a store without paying, I will get caught.

likely 1 2 3 4 5 6 7 unlikely

My taking something from a store without paying will cause prices of merchandise to increase.

likely 1 2 3 4 5 6 7 unlikely

Motivation to comply

I care whether store owners approve or disapprove of my taking something from a store without paying.

very much 1 2 3 4 5 6 7 not at all

I care whether my parents approve or disapprove of my taking something from a store without paying.

very much 1 2 3 4 5 6 7 not at all

I care whether my friends approve or disapprove of my taking something from a store without paying.

very much 1 2 3 4 5 6 7 not at all

I care whether the police approve or disapprove of my taking something from a store without paying.

very much 1 2 3 4 5 6 7 not at all

I care whether store employees approve or disapprove of my taking something from a store without paying.

very much 1 2 3 4 5 6 7 not at all

Normative Beliefs

If I take something from a store without paying, the store owners would

not care 1 2 3 4 5 6 7 disapprove

If I take something from a store without paying, my parents would

not care 1 2 3 4 5 6 7 disapprove

If I take something from a store without paying, my friends would

not care 1 2 3 4 5 6 7 disapprove

If I take something from a store without paying, the police would

not care 1 2 3 4 5 6 7 disapprove

If I take something from a store without paying, store employees would

not care 1 2 3 4 5 6 7 disapprove

Control Evaluations

Usually, the number of store employees around would make it difficult to take something from a store without paying.

true 1 2 3 4 5 6 7 false

Usually, the presence of mirrors in the store makes it difficult to take something without paying.

true 1 2 3 4 5 6 7 false

The security systems in most stores make it difficult to take something without paying.

true 1 2 3 4 5 6 7 false

The presence of security guards in most stores makes it difficult to take something without paying.

true 1 2 3 4 5 6 7 false

The number of customers in most stores makes it easy to take something without paying.

The size of the item would often make it difficult to take it from the store without paying.

true 1 2 3 4 5 6 7 false

The presence of cameras in most stores makes it difficult to take something without paying.

true 1 2 3 4 5 6 7 false

The size of most stores makes it easy to take something without paying.

true 1 2 3 4 5 6 7 false

Lying Items

Introduction

False excuses can be used in many circumstances: to get out of a social engagement or avoid admitting a mistake, for instance. In this part of the questionnaire, we want to know your feelings about using false excuses to get out of taking a test or turning in an assignment on time. Please answer each question honestly. Remember, your responses are anonymous.

Self-report

In the last 12 months, how many times have you used a false excuse to get out of taking a test or turning in a class assignment on time? (circle one)

never once twice 3 times 4 times 5 times more than 5 times

Behavioral Evaluations

My getting more time to study or work on an assignment is

good 1 2 3 4 5 6 7 bad

My getting better grades is

good 1 2 3 4 5 6 7 bad

My getting into the habit of using a false excuse to get out of taking a test or turning in an assignment on time is

good 1 2 3 4 5 6 7 bad

Getting to do something I enjoy instead of taking a test or doing an assignment on is

good 1 2 3 4 5 6 7 bad

My taking a make-up test or doing a make-up assignment that is more difficult than the original is

good 1 2 3 4 5 6 7 bad

My getting information about a test or assignment from others is

good 1 2 3 4 5 6 7 bad

The professor not believing me when I have a real excuse is

good 1 2 3 4 5 6 7 bad

My getting behind on future assignments is

good 1 2 3 4 5 6 7 bad

My appearing to be irresponsible is

good 1 2 3 4 5 6 7 bad

The professor not believing my false excuse is

good 1 2 3 4 5 6 7 bad

Behavioral beliefs

If I use a false excuse to get out of taking a test or turning in an assignment on time, I will get more time to study or work on the assignment.

likely 1 2 3 4 5 6 7 unlikely

Using a false excuse to get out of taking a test or turning in an assignment on time will result in my getting a better grade.
likely 1 2 3 4 5 6 7 unlikely

Using a false excuse to get out of taking a test or turning in an assignment on time could become a habit.
likely 1 2 3 4 5 6 7 unlikely

If I use a false excuse to get out of taking a test or turning in an assignment on time I will get to do something else I'd rather do.
likely 1 2 3 4 5 6 7 unlikely

If I use a false excuse to get out of taking a test or turning in an assignment on time the make-up test or assignment may be more difficult.
likely 1 2 3 4 5 6 7 unlikely

If I use a false excuse to get out of taking a test or turning in an assignment on time I could get information about the test or assignment from others.
likely 1 2 3 4 5 6 7 unlikely

If I use a false excuse to get out of taking a test or turning in an assignment on time the professor won't believe me later when I have a real excuse.
likely 1 2 3 4 5 6 7 unlikely

Using a false excuse to get out of taking a test or turning in an assignment on time will result in my getting behind for future assignments.
likely 1 2 3 4 5 6 7 unlikely

Using a false excuse to get out of taking a test or turning in an assignment on time will make me appear irresponsible.
likely 1 2 3 4 5 6 7 unlikely

If I use a false excuse to get out of taking a test or turning in an assignment on time, the professor might not believe me.
likely 1 2 3 4 5 6 7 unlikely

Motivation to comply

I care whether my classmates approve or disapprove of my using a false excuse to get out of taking a test or turning in an assignment on time.

very much 1 2 3 4 5 6 7 not at all

I care whether my professor approves or disapproves of my using a false excuse to get out of taking a test or turning in an assignment on time.

very much 1 2 3 4 5 6 7 not at all

I care whether my friends approve or disapprove of my using a false excuse to get out of taking a test or turning in an assignment on time.

very much 1 2 3 4 5 6 7 not at all

I care whether my parents approve or disapprove of my using a false excuse to get out of taking a test or turning in an assignment on time.

very much 1 2 3 4 5 6 7 not at all

Normative Beliefs

If I use a false excuse to get out of taking a test or turning in an assignment on time, my classmates would

not care 1 2 3 4 5 6 7 disapprove

If I use a false excuse to get out of taking a test or turning in an assignment on time, my professor would

not care 1 2 3 4 5 6 7 disapprove

If I use a false excuse to get out of taking a test or turning in an assignment on time, my friends would

not care 1 2 3 4 5 6 7 disapprove

If I use a false excuse to get out of taking a test or turning in an assignment on time, my parents would

not care 1 2 3 4 5 6 7 disapprove

Control Beliefs

It is easy for me to use a false excuse to get out of taking a test or turning in an assignment on time because I know most of my professors.

true 1 2 3 4 5 6 7 false

The leniency of most of my professors makes it easy for me to use a false excuse to get out of taking a test or turning in an assignment on time.

true 1 2 3 4 5 6 7 false

My ability to make up a good story makes it easy for me to use a false excuse to get out of taking a test or turning in an assignment on time.

true 1 2 3 4 5 6 7 false

The need to provide proof makes it hard for me to use a false excuse to get out of taking a test or turning in an assignment on time.

true 1 2 3 4 5 6 7 false

Being a good actor makes it easy for me to use a false excuse to get out of taking a test or turning in an assignment on time because I am a good actor.

true 1 2 3 4 5 6 7 false

It would be more difficult for me to use a false excuse to get out of taking a test or turning in an assignment on time because it would probably be all my fault for not being prepared.

true 1 2 3 4 5 6 7 false

Having something important to do often makes it easy for me to use a false excuse to get out of taking a test or turning in an assignment on time.

true 1 2 3 4 5 6 7 false

It would be difficult for me to use a false excuse to get out of taking a test or turning in an assignment on time because my work would pile up.

true 1 2 3 4 5 6 7 false

APPENDIX B

MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE¹

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

- T F Before voting I thoroughly investigate the qualifications of all the candidates.
- T F I never hesitate to go out of my way to help someone in trouble.
- T F It is sometimes hard for me to go on with my work if I am not encouraged.*
- T F I have never intensely disliked anyone.
- T F On occasion I have had doubts about my ability to succeed in life.*
- T F I sometimes feel resentful when I don't get my way.*
- T F I am always careful about my manner of dress.
- T F My table manners at home are as good as when I eat out in a restaurant.
- T F If I could get into a movie without paying and be sure I was not seen, I would probably do it.*
- T F On a few occasions, I have given up doing something because I thought too little of my ability.*
- T F I like to gossip at times.*
- T F There have been times when I felt like rebelling against people in authority even though I knew they were right.*
- T F No matter who I'm talking to, I'm always a good listener.
- T F I can remember 'playing sick' to get out of something.*
- T F There have been occasions when I took advantage of someone.*
- T F I'm always willing to admit it when I make a mistake.
- T F I always try to practice what I preach.
- T F I don't find it particularly difficult to get along with loud mouthed, obnoxious people.

- T F I sometimes try to get even, rather than forgive and forget.*
- T F When I don't know something I don't at all mind admitting it.
- T F I am always courteous, even to people who are disagreeable.
- T F At times I have really insisted on having things my own way.*
- T F There have been occasions when I felt like smashing things.*
- T F I would never think of letting someone else be punished for my wrongdoings.
- T F I never resent being asked to return a favor.
- T F I have never been irked when people expressed ideas very different from my own.
- T F I never make a long trip without checking the safety of my car.
- T F There have been times when I was quite jealous of the good fortune of others.*
- T F I have almost never felt the urge to tell someone off.
- T F I am sometimes irritated by people who ask favors of me.*
- T F I have never felt that I was punished without cause.
- T F I sometimes think when people have a misfortune they only got what they deserved.*
- T F I have never deliberately said something that hurt someone's feelings.

¹ Starred items are reverse scored.

APPENDIX C

REASONED AND SPONTANEOUS ACTION SCALES¹

Reasoned Action Scale

When filling out forms (an application form, for example), I carefully read the instructions before filling in any blanks.

I usually have clear, explainable reasons for my decisions.

Most people I know are better organized than I am.*

I am generally on time for appointments.

I try to weigh all the pros and cons before making a decision.

I keep a careful record of my expenses.

I usually have assignments ready on time.

I generally am a logical person.

Once I have made a plan, I tend to follow it to its completion.

I normally avoid working on projects that require a great deal of planning and preparation.*

I have a tendency to act without thinking about the consequences.*

Spontaneous Action Scale

I tend to waver back and forth before making an important decision.

When a friend tells me about a personal problem, I often don't know the right thing to say.

I have to work at being spontaneous.

I tend to be more enthusiastic about things than the average person.*

If I could live the last few years over again, I wouldn't change many of the things I have done.*

I have a hard time making friends.

I have no clear idea of what my life will be like 10 years from now.

I have sometimes missed out on opportunities because I couldn't make up my mind.

When it comes to trusting other people, I can usually rely on my gut feelings.*

I find it difficult to put the reasons for my actions into words.

I usually say what is on my mind.*

In most situations, I know that what I am doing is right.*

Candidates for political office all tend to look alike to me.

I just know intuitively when to take a chance and when to avoid it.*

When necessary, I can be very assertive.*

I usually trust my instincts when deciding on a new course of action.*

I tend to avoid activities that involve risk or danger.

I generally know what I want out of life and how to get it.*

I usually sense right away whether a person is trustworthy or not.*

I typically keep my feelings to myself.

¹ Items are scored from 1 to 5. Starred items are reverse scored.

APPENDIX D

NEED FOR COGNITION SCALE¹

I would prefer complex to simple problems.

I like to have the responsibility of handling a situation that requires a lot of thinking.

Thinking is not my idea of fun.*

I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*

I try to anticipate and avoid situations where there is likely chance I will have to think in depth about something.*

I find satisfaction in deliberating hard and for long hours.

I only think as hard as I have to.*

I prefer to think about small, daily projects than long-term ones.*

I like tasks that require little thought once I've learned them.*

The idea of relying on thought to make my way to the top appeals to me.

I really enjoy a task that involves coming up with new solutions to problems.

Learning new ways to think doesn't excite me very much.*

I prefer my life to be filled with puzzles that I must solve.

The notion of thinking abstractly is appealing to me.

I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.

I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*

It's enough for me that something gets the job done; I don't care how or why it works.*

¹ Items were scored on a 1 (agree) to 7 (disagree) scale. Starred items were reverse scored.

Due to a printing error, one item (not shown) was not included on the questionnaire.

APPENDIX E

EYSENCK IMPULSIVENESS SCALE¹

Do you often buy things on impulse?

Do you often get into a jam because you do things without thinking?

Would you prefer a job involving change, travel and variety, even though it might be insecure?

Do you like planning things carefully ahead of time?

Do you save regularly?

Do you enjoy taking risks?

Would you rather plan things than do things?

Do you generally do and say things without stopping to think?

Do you usually make up your mind quickly?

When the odds are against you, do you still usually think it worth taking a chance?

Would you make sure you had another job before giving up your old one?

Can you make decisions quickly?

Do you usually think carefully before doing anything?

Are you an impulsive person?

Would you enjoy parachute jumping?

Would regular health check-ups make you feel better?

When you go on a trip, do you like to plan routes and timetables carefully?

Are you slow and unhurried in the way you move?

Would life with no danger in it be too dull for you?

Are you rather cautious in unusual situations?

Do you often do things on the spur of the moment?

Do you often get involved in things you later wish you could get out of?

Would you enjoy fast driving?

Do you prefer activities that 'just happen' to those planned in advance?

Do you usually speak before thinking things out?

Would you do almost anything for a dare?

Can you put your thoughts into words quickly?

If it were practically possible, would you like to live each day as it comes along?

Do you get so 'carried away' by new and exciting ideas that you never think of possible snags?

Do you prefer to 'sleep on it' before making decisions?

Do you often change your interests?

Do you need to use a lot of self-control to keep out of trouble?

When on vacation, do you look for relaxation instead of excitement?

Do you think an evening out is more successful if it is unplanned or arranged at the last moment?

Are you usually carefree?

Before making up your mind, do you carefully consider all the advantages and disadvantages?

Do you get bored more easily than most people, doing the same old things?

Would you agree that planning things takes the fun out of life?

Do you get extremely impatient if you are kept waiting by someone who is late?

Are you an easy going person, not generally bothered about having everything just right?

Do you often long for excitement?

Do you hate standing in a long line for anything?

¹ Subjects circled "YES" or "NO" in response to the items.

APPENDIX F

STUDY 2 QUESTIONNAIRE ITEMS

Cheating Items

Importance

Whether or not I cheat on a test or exam is an important issue for me.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

I have strong feelings regarding cheating on tests or exams.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

Thought

I have thought a lot about using a false excuse to get out of taking a test or turning in an assignment on time.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

Control Beliefs

In most of my tests or exams, I sit close to other students.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

Most of the tests or exams I take are closely supervised.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

Most of the tests or exams I take are in small classes.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

I have respect for most of my teachers.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

Different test forms are usually distributed for most of my tests or exams.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

I usually sit near friends in most of my tests or exams.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

In most of my tests or exams, the professor doesn't seem to care about cheating.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

In most of my tests or exams, books and papers can be left out.

true	1	2	3	4	5	6	7	false
------	---	---	---	---	---	---	---	-------

Control Evaluations

Sitting close to other students during a test or exam makes cheating easy

1	2	3	4	5	6	7	difficult
---	---	---	---	---	---	---	-----------

Close supervision of a test or exam makes cheating

easy	1	2	3	4	5	6	7	difficult
------	---	---	---	---	---	---	---	-----------

Small class size makes cheating on a test or exam

easy	1	2	3	4	5	6	7	difficult
------	---	---	---	---	---	---	---	-----------

Having respect for the professor makes cheating on a test or exam

easy	1	2	3	4	5	6	7	difficult
------	---	---	---	---	---	---	---	-----------

Different forms of a test or exam make cheating

easy	1	2	3	4	5	6	7	difficult
------	---	---	---	---	---	---	---	-----------

Sitting near friends during a test or exam makes cheating
 easy 1 2 3 4 5 6 7 difficult
 The professor not caring about cheating makes cheating on a test or
 exam
 easy 1 2 3 4 5 6 7 difficult
 Books and papers being left out during a test or exam makes cheating
 easy 1 2 3 4 5 6 7 difficult

Shoplifting Items

Control Beliefs

In most stores I visit, there are usually a lot of employees around.

true 1 2 3 4 5 6 7 false

Most stores I visit have mirrors enabling employees to watch customers.

true 1 2 3 4 5 6 7 false

Most stores I visit have security systems.

true 1 2 3 4 5 6 7 false

Most stores I visit have security guards on duty.

true 1 2 3 4 5 6 7 false

There usually aren't many other customers around when I visit a store.

true 1 2 3 4 5 6 7 false

Most things I might want are small enough to be hidden in my jacket or purse.

true 1 2 3 4 5 6 7 false

Most stores are equipped with cameras for monitoring customers.

true 1 2 3 4 5 6 7 false

Most of the stores I visit are relatively small.

true 1 2 3 4 5 6 7 false

Control Evaluations

Having a lot of employees around makes taking something from a store without paying

easy 1 2 3 4 5 6 7 difficult

Mirrors in the store make taking something without paying

easy 1 2 3 4 5 6 7 difficult

Security systems in the store make taking something without paying

easy 1 2 3 4 5 6 7 difficult

Security guards on duty make taking something without paying

easy 1 2 3 4 5 6 7 difficult

Not having many other customers around makes taking something without paying

easy 1 2 3 4 5 6 7 difficult

Small size of the item makes taking it from the store without paying

easy 1 2 3 4 5 6 7 difficult

Having cameras in the store makes taking something without paying

easy 1 2 3 4 5 6 7 difficult

Small store size makes taking something without paying

easy 1 2 3 4 5 6 7 difficult

Lying Items

Control Beliefs

I know most of my professors pretty well.	true	1	2	3	4	5	6	7	false
Most of my professors are lenient.	true	1	2	3	4	5	6	7	false
I am good at making up excuses.	true	1	2	3	4	5	6	7	false
Most of my professors require proof before letting people out of taking a test or turning in an assignment on time.	true	1	2	3	4	5	6	7	false
I am a good actor.	true	1	2	3	4	5	6	7	false
It is usually my fault when I am not prepared to take a test or exam.	true	1	2	3	4	5	6	7	false
When I am not prepared to take a test or exam, it is usually because I have something important to do.	true	1	2	3	4	5	6	7	false
If I get out of taking a test or turning in an assignment on time, my work would just pile up.	true	1	2	3	4	5	6	7	false

Control Evaluations

Knowing my professor makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult
Having a lenient professor makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult
Being good at making up excuses makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult
Needing to provide proof makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult
Being a good actor makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult
Knowing that it is my fault for not being prepared makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult
Having something important to do makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult
Knowing that it would cause my work to pile up makes using a false excuse to get out of taking a test or turning in an assignment on time	easy	1	2	3	4	5	6	7	difficult

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