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## Strengthening the normative component of the theory of planned behavior through normative judgments.

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STRENGTHENING THE NORMATIVE COMPONENT  
OF THE THEORY OF PLANNED BEHAVIOR  
THROUGH NORMATIVE JUDGMENTS

A Thesis Presented

by

FRANKLIN CARVAJAL

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

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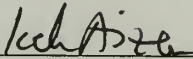
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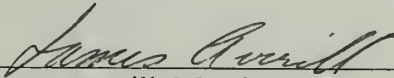
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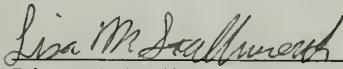
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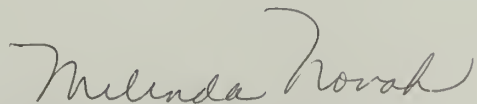
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## DEDICATION

To the world for giving me the concepts and terms needed to write this thesis.

## ACKNOWLEDGMENTS

I would like to thank the fantastic three: Dr. Icek Aizen for teaching me to contribute something new to the field of social psychology, Dr. Jim Averill for making me look at the big picture, and Dr. Lisa M. Stallworth for helping me have clarity of vision and expression.

ABSTRACT

STRENGTHENING THE NORMATIVE COMPONENT  
OF THE THEORY OF PLANNED BEHAVIOR  
THROUGH NORMATIVE JUDGMENTS

SEPTEMBER 2000

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The theory of planned behavior (Ajzen 1988) proposes that to predict behavior four variables should be considered: attitudes, subjective norms, perceived behavioral control (PBC), and intentions. The present study sought to strengthen the normative component of the theory of planned behavior (i.e., subjective norms) by replacing the construct of subjective norms with the notion of normative judgments. The term normative judgment refers to a class of judgments abstracted from four types of norms represented by four influential theories of norms: personal norms (Schwartz & Fleishman, 1978), descriptive and injunctive norms (Cialdini, Reno, & Kallgren, 1990), and habits (Ouelette, 1998). From these theories, four types of normative judgments emerged: (a) morality or the degree to which people judge their own performance of certain behaviors to be moral, (b) permissibility or the extent to which people judge given actions as something they are allowed to do, (c) commonality or how common they consider enactment of particular behaviors, and (d) normality or the degree to which people judge certain behaviors to be actions that are normal for them to carry out. Placed inside the framework of the theory of planned behavior, each type of normative judgment by itself

was expected to best predict one out of four corresponding classes of behavior influenced by a particular type of norm. For each theory of norms, participants identified two behaviors under its influence. Then, they rated these behaviors on each of the four normative judgments. Results indicated that judgments of normality conceptually duplicated intentions, veiling the effects of the remaining normative judgments. When normality judgments were excluded from the hierarchical regression analyses, the study confirmed half of the predictions.

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CHAPTER I

STRENGTHENING THE NORMATIVE COMPONENT  
OF THE THEORY OF PLANNED BEHAVIOR  
THROUGH NORMATIVE JUDGMENTS

A. Introduction

Social psychology has long been interested in social influence, an area that seems to encompass a variety of intensively studied topics including attitude change, conformity, and group dynamics. Of all of the social influence phenomena of interest, social norms stand out as the best known but, paradoxically, least understood concept. Norms will, however, not be treated in the traditional way, as external phenomena that compel people to behave in certain ways, but rather as internal states that impel people to carry out certain actions. The focus will be not on norms as social influences exerted from without, but as personal judgments freely made from within. Thus, the relationship between norms and behavior will be presented not as the immediate influence of societal or cultural pressures on people's actions, but as the result of simple judgments people make in their everyday life. To be more specific, norms will be viewed as just one more type of disposition, as tendencies or inclinations to judge an action in a particular way.

Because its central theme is the notion of norms, this document limits its scope to those personal judgments people use to describe behavior normatively. These judgments will understandably go by the name of normative judgments. Focusing on normative judgments, the objective of the present research is threefold. First, it seeks to extrapolate from four theories found in the norm literature—personal, injunctive, descriptive, and habitual norm theories—four corresponding normative judgments: morality,

permissibility, commonality, and normality. Second, with the help of the theory of planned behavior, it aims at demonstrating that each of the four normative judgments predicts certain behaviors but not others. Third, through achieving this second goal, it expects to strengthen the predictive power and accuracy of the normative component of the theory of planned behavior.

### B. Extrapolating Normative Judgments

Upon reviewing the norm literature in social psychology, four main theories stand out as representing different ways of understanding the relationship between norms and behavior. For instance, descriptive norms deal with the relationship between interpersonal perceptions and norms. This type of norm refers to people's perception of what most people do (Cialdini, Reno, & Kallgren; 1990). At the same time, each of the norm theories suggests certain types of judgments people make in their everyday affairs. For example, perception of what most people do (descriptive norms) is a judgment (See Figure 1). Thus, in an indirect way, descriptive norms also refer to people's knowledge of what is commonly and widely done. This knowledge is summarized by and condensed into a simple word people use to judge their own actions, as well as those of others. In the case of descriptive norms, people judge actions as being either common or uncommon. Therefore, the first normative judgment discussed in this paper goes by the name of normative judgment of commonality, and it indicates to a person that the action he or she is about to perform is a common one.

Injunctive norms theory is also in the tradition of interpersonal perception approaches to norms. It states that an injunctive norm is a person's perception of what most people approve (Cialdini, Kallgren, & Reno; 1991). Thus, injunctive norms equate

to judgments of what most people approve. As in the case of descriptive norms, certain words carry the meaning of these judgments, and, therefore, contain one more piece of norm knowledge in the form of a summary label. These observations lead to a second class of normative judgments people make: normative judgments of permissibility. They refer to what people allow, permit, or consent themselves to do. They, too, let a person know the meaning of the behavior he or she is about to perform. Normative judgments of permissibility tell people that the behavior they are about to perform is OK to do.

A third theory found in the norm literature is personal norms (Schwartz, 1977). Briefly put, personal norms refer to people's perception of feeling a personal moral obligation to perform an action. This feeling of moral obligation stem from networks of internalized specific values and norms. As such, personal norms deal with another aspect of norms, namely, the specific rules and regulations guiding everyday behavior. The third type of normative judgments to be discussed in this document share in common with personal norms the notion of morality. While personal norms involve moral obligation, normative judgment of morality refers to moral knowledge. As with all other normative judgments, the meaning of this type of judgment is conveyed by a particular word, namely, the adjective moral/immoral. This simple label acts as a signal flag indicating to its carrier that the action he or she is about to perform is a moral one.

Some issues related to the last type of norm considered in this study, habitual norm, makes it difficult to extrapolate a fourth type of normative judgment. As a starting difficulty, there exist in the norm literature numerous conceptualizations of habits. At least four prominent definitions of habit exist. As early as 1872, but certainly earlier than that, habits represented an internal physiological state residing in networks of affector-

effector nerve fibers and preparing the organism for action execution (Darwin, 1872; Hull, 1943). According to this account, habits are nothing more than activation potentials that exist in the nervous system, that external events trigger, and that precede and motivate behavior. These activation potentials result from repetition of behavior.

Most current theories of habits closely followed the preceding accounts; however, they shifted the location of the activation potentials from a concrete (i.e., nervous system) to an abstract mental space (i.e., the mind) (Ouellette, & Wood; 1998). In line with past accounts, repeated performance of behavior results in the formation of habits or behavioral tendencies. Responsible for these behavioral dispositions are not physiological activation potentials housed in the nervous system, but mental representations of movement initiation, implementation, and termination stored in memory. Unchanging contexts that provide stable cues activate these unconscious mental representations which, in turn, manifest themselves as automatic behaviors. Habits stand for the last aspect of norms often examined in the literature, namely, unconscious processes.

Unfortunately, upon close examination, the preceding two theories of habit hardly lend themselves to a normative analysis, partly due to their focus on cognitive or physiological processes outside of awareness. My view on this issue is that researches, in their identification and examination of habits, should not make consciousness the focus of attention. To say that something was done out of habit is not to say that it was done unconsciously, but that it was done because of repeated practice or experience. The notion of consciousness is a separate issue to be dealt with elsewhere when examining habits.

A second problem in attempting to extrapolate a fourth normative judgment is that it seems inappropriate to include the notion of habits as a central idea found in the norm literature, and yet, it appears irresistible not to think of norms when the habit construct makes its appearance. This natural tendency for habits to invoke norms is not an arbitrary one, for the term inevitably suggests repeated practices (i.e., customs and traditions) that ultimately result in established patterns of behavior. If habits seem inappropriate given the context of the present study, it is only because they do not conform to the traditional way of thinking of norms as external sources of social influence. However, upon taking a closer look, it becomes apparent that habits are indeed the best evidence of the existence and operation of as well as the effects of norms on people's behavior.

One of the characteristics of habitual behavior is that it is frequently repeated and difficult not to do. However, a motive for repetition is needed in order to explain people carrying out the same behavior multiple times. Norms and many other reasons exist for people repeating the same behavior. Perhaps they obtain pleasure from carrying it out or are afraid of social punishment for not performing it. Maybe it is required of them at their jobs or has become part of a hobby. Whatever the reason might be for someone performing the same behavior lots of times, the effects will be similar: the behavior will gradually be easier and easier to carry out and harder and harder to stop doing. A behavior that is easy to do is a one that has little room for extra learning and requires little of cognitive resources. One word encapsulates the meaning of a behavior that exhibits these attributes, namely, normal. At this point the notion of normative judgments of normality makes its appearance.

Normative judgments of normality, thus, simply refer to people's judgments of actions they internally experience or feel as normal, comfortable, and fitting. For instance, people subjectively experience dancing to a well-known type of music as normal, as matching the actions they usually carry out during dancing—in this case, a sense of comfort accompanies the movements involved in dancing. Conversely, when dancing to a unknown genre of music, these same people might subjectively experience the new required set of movements as abnormal, as mismatching actions they usually carry out—in this case, a sense of discomfort will follow. Statements such as “I just don't feel right doing that”, “doing that makes me feel uncomfortable”, “that behavior just does not fit me”, “doing it just became natural”, and “I am not being myself”, are everyday examples of the phenomenology of judgments of normality.

Normative judgments of morality, permissibility, commonality, and normality are among some of the judgments social psychologists are interested in. In general, social psychologists are primarily interested in whether certain types of judgments people make in their everyday life covary with their behavior. The study of attitudes is a prime example; social psychologists observe whether people's likes and dislikes covary with their actions. Social psychologists also invest efforts in understanding the links that exist among judgments—for example, whether normative judgments are related to each other or to other variables. Indeed, they formulate theories that by their very nature describe relationships among judgments and among judgments and behavior. The theory of planned behavior (Ajzen, 1988) illustrates these two interests social psychologists have: The theory postulates that three types of judgments—attitude, subjective norm, and

perceived behavioral control judgments—directly covary with behavioral intention judgments. Intention judgments in turn directly covary with behavior.

More specifically, the first type of judgment in the theory, attitude, refers to people's judgments of whether they favor or oppose a particular course of action. This variable focuses on the consequences of performing an action, specifically, on how the consequences are evaluated and how likely they are to occur. Pleasant and likely consequences strengthen people's attitudes to perform corresponding behaviors, whereas unpleasant and unlikely outcomes do the opposite. For instance, the consequence of cutting in line could be a cold stare, a reprimand, or a push. Presumably, people estimate how likely and how desirable each of these consequences would be in forming their attitudes toward this behavior. The second type judgment, subjective norms, represents the interest focus of the present thesis. It reflects social pressures to conform to others' prescriptions for behavior, particularly if the others are important. Subjective norms also take into consideration people's own desires to act in agreement with important others' prescriptions for behavior. The last type of judgment in the theory of planned behavior, perceived behavioral control, refers to people's judgment of how difficult performing a particular behavior would be.

These three judgments—attitudes, subjective norms, and perceived behavioral control—jointly influence behavior through their effects on a fourth judgment, namely, intentions. Intentions to carry out an action are then the closest judgment variable determining behavior. For instance, given that one has a positive attitude toward being late for a first date (attitude), one's friends think it is OK to be late for a first date (subjective norms), and one feels that being late for a first date would be easy to do

(perceived behavioral control), an intention to be late for a first date would most likely develop. This intention then would translate into the actual behavior, being late for a date. To repeat, recasting the theory of planned behavior in terms of judgments equates to saying that three types of judgments covary with a fourth type, and that this fourth judgment covaries with behavior.

To bring things back into perspective, the focus of the present research is on the normative component of the theory of planned behavior, subjective norms. This thesis substitutes normative judgments for subjective norms on the ground that personal considerations, such as attitudes, perceived behavioral control, and moral values, are stronger influences than social pressures (i.e., subjective norms) for certain classes of behavior (see Ajzen, 1991, for a review of 16 studies leading to this conclusion). A case in point supporting the contention that knowing about people's personal considerations is more important than being aware of social pressures is the concept of habit. It is habits' private nature that agrees with the fundamental assumption of normative judgment theory that prediction of behavior must begin in how the individual judges his or her actions, not in how others judge the individual's actions. Although social pressures exist in the form of expected or required courses of action, it is how the people under these pressures judge the behaviors they are about to perform that ultimately matters. It is not so much what others expect or require that matters, but how the people in question think—allowed, moral, common, or normal—about the action. It follows that the meanings normative judgments convey to people and impart to behavior are ultimately responsible for its performance. This is in line with the assumption made by the theory of normative judgments that behavior is best predicted when internal psychological forces stemming

from dispositions, tendencies, or inclinations (such as normative judgments) are considered first in any explanatory model. The fact that people regularly exercise discretion or the freedom to judge and act on their own terms is the most important support for and foundation on which the theory of normative judgments rests.

Although, everyday, all types of social influences undeniably exert their force on people's thinking and behavior, it is undoubtedly these people's own personal judgments, affected or unaffected by external social factors, that ultimately dictate the nature and direction of their behavior. Normative judgments do just that, they inform the person of the nature of the behavior he or she is about to engage in. They give behavior their meaning, and it is this meaning that energizes and guides it. People can take into consideration other people's desires, feelings, expectations, thoughts, or behavior when formulating a decision to take a course of action, but their own psychological factors—desires, feelings, etc.—are often what ultimately makes a difference in terms of choice of behavior. Again, this is not to say that external social factors do not have an effect on what people do, or else social psychology would not exist, but that given the great weight placed on norms as social influence, this thesis is interested in the other side of the coin, on people's normative judgments.

Evidence accumulated thus far in the attitude literature suggests that other idiosyncratic and personal judgments, such as morally based ones, might add to the predictive power of the normative component of the TPB, above and beyond subjective norms (Boyd & Woadersman, 1991; Gorsuch & Ortberg, 1983; Harland, Staats, and Wilke, 1999; Kurland, 1995; Parker, Manstead, & Stradling, 1995; Pagel & Davidson, 1984; Pomazal & Jaccard, 1976; Raats, Sheperd, & Sparks, 1995; Schwartz & Tesller,

1972; Zuckerman & Reis, 1978; ). This evidence additionally supports the contention that subjective norms are the weakest predictor of behavior (Godin & Kok, 1996, Sheppard, Harwick, & Warshaw, 1988; van den Putte, 1991). Indeed, at times subjective norms fail to predict behavior altogether (Beck & Ajzen, 1991). For these three reasons, the present study chose to focus on four personal judgments that might supplement and strengthen the predictive power of the normative component of the TPB. Given that up to now only normative judgments of morality have been properly examined, this study seeks to explore three less well-understood normative judgments—permissibility, commonality, and normality—and to further investigate normative judgments of morality.

### C. Pilot Work

In a pilot study 60 UMASS undergraduate students judged one hundred and fifteen behaviors. They classified these behaviors based on whether they performed them (a) because of their own moral standards (corresponding to normative judgments of morality), (b) because of rules and regulations imposed by society (corresponding to normative judgments of permissibility), (c) because they were customs, traditions, or common practices (corresponding to normative judgments of commonality), or (d) because people who are important to them believe they should (corresponding to normative judgments of normality). The last type of normative explanation for behavior does not seem to match its corresponding normative judgment of normality because the pilot work was conducted with a different classification scheme in mind. Therefore, the results concerning normative judgments of normality are tentative and thus must be treated with care.

Out of the hundred and fifteen behaviors, eight qualified for the present study on the basis of their high rankings (specifically their statistic mode) on only one of the four ratings above. A listing of these eight behaviors follows:

Actions most often classified as influenced by moral standards:

1. Revealing the personal secrets of someone one knows to others.
2. Exchanging numbers with someone at a party even though one has a girlfriend or boyfriend.

Actions most often classified as governed by rules and regulations imposed by society:

1. Cutting in line at a theater restroom.
2. Being late for a date.

Actions most often classified as conforming to customs and common practices:

1. Eating cake using your hands at a dinner party.
2. Being late for a psychology class.

Actions most often classified as regulated by people who are deemed important:

1. Studying on a Saturday night.
2. Sitting in front of the class.

To reemphasize the rationale for choosing eight behaviors, the little knowledge accumulated on the relationship between types of behaviors and normative judgments justified the inclusion of two behaviors per normative judgment. The more behaviors included, the better chance of revealing those behavioral features that might elicit particular normative judgments, of increasing the internal validity of normative judgment theory, and thus of extending the generalizability of the findings to other behaviors.

#### D. Predictions

First, I expect that normative judgments of morality best predict intentions to perform or not to perform those behaviors influenced by moral standards; judgments of permissibility those actions governed by rules and regulations; normative judgments of commonality those behaviors conforming to customs and common practices; and normative judgments of normality those actions regulated by people whom are deemed important.

## CHAPTER II

### METHOD

#### A. Participants

One hundred and fifty students seeking to fulfill a course requirement participated in a correlational study. Normative judgments of morality, permissibility, commonality, and normality, in addition to attitudes and perceived behavioral control, constituted the predictor variables and intention the criterion variable. Randomly assigned participants completed one of eight counterbalanced versions of a questionnaire. Each questionnaire contained eight situations.

#### B. Materials

##### 1. Behaviors and Situations

Eight behaviors featured in the present study: revealing the personal secrets of someone one knows to others, exchanging numbers with someone at a party even though one has a girlfriend or boyfriend, cutting in line, being late for a date, eating cake using the hands, being late for class, studying on a Saturday night, and sitting in front of the class. As previously pointed out, a pilot study indicated that the first two actions evoked normative judgment of morality, the next two, normative judgment of permissibility, the following two, normative judgment of commonality, and the last two, normative judgment of normality. The contexts in which the behaviors occurred follows:

- Situation 1 (The prediction is that normative judgments of morality would account for intention to perform this behavior). You find out that an acquaintance of yours is dating a UMASS student you have recently met. This

student confided in you that he or she occasionally goes through severe bouts of depression. You wonder whether to reveal this information to your acquaintance.

The student is then asked to rate the behavior revealing the personal secret of the student to your acquaintance on a series of scales described below.

- Situation 2 (The prediction is that normative judgments of morality would also account for intention to perform this behavior). You and your boyfriend/girlfriend have been accepted to schools in separate states, however, you two are still committed to the relationship. Two weeks into the semester you go to a party. At this party you start conversing with someone you find attractive. Towards the end of the party this person asks you to exchange phone numbers—you hesitate to respond.

The student is then asked to rate the behavior exchanging numbers with the person at the party.

- Situation 3 (The prediction is that normative judgments of permissibility would account for intention to perform this behavior). At the local movie theater, you are waiting in the restroom line to use one of the stalls. The line is relatively long, and you casually notice that the two people in front of you are furiously debating about the movie's theme. The next stall becomes free, but these two don't notice. You are beginning to be tempted to cut in line.

The student is then asked to rate the behavior cutting in line.

- Situation 4 (The prediction is that normative judgments of permissibility would also account for intention to perform this behavior). You are single, and you have just met someone special at UMASS. Naturally, a first official date is planned.

The student is then asked to rate the behavior arriving late to the first date.

- Situation 5 (The prediction is that normative judgments of commonality would account for intention to perform this behavior). You are taking a psychology class that meets twice a week.

The student is then asked to rate the behavior arriving late to the psychology class.

- Situation 6 (The prediction is that normative judgments of commonality would also account for intention to perform this behavior). You are invited to an informal dinner party by a classmate. After eating the main course, cake is served as dessert to everyone present.

The student is then asked to rate the behavior eating the cake using your hands at the dinner party.

- Situation 7 (The prediction is that normative judgments of normality would account for intention to perform this behavior). You are taking a full load of classes, and your next exam is two weeks away. It is Saturday night, and you don't have any plans.

The student is then asked to rate the behavior studying on this Saturday night.

- Situation 8 (The prediction is that normative judgments of normality would also account for intention to perform this behavior). You are taking a psychology class that meets twice a week.

The student is then asked to rate the behavior sitting in front of the class.

### 1. Independent and Dependent Variables

To avoid redundancy, cutting in line will be used as an example of how the variables in this study were measured .

Five seven-point semantic-differential scales ending at bad-good, unpleasant-pleasant, foolish-wise, useless-useful, and unattractive-attractive measured attitudes towards cutting in line.

Three items measured perceived behavioral control of cutting in line: (1) “If I wanted to, I could cut in line (ending at false-true).” (2) “I find cutting in line a difficult thing to do (ending at false-true; this item was reverse scored).” (3) “Cutting in line would take a great deal of effort on my part (ending at disagree-agree; this item was also reverse scored).” Higher scores on these scales indicate greater perceived behavioral control.

Four items assessed normative judgment of morality, permissibility, commonality, and normality: “I think that cutting in line would be an action that is (ending at morally right-morally wrong for morality, allowed-not allowed for permissibility, common-uncommon for commonality, and typical of me-not typical of me for normality)”. These four items were reverse-scored so that higher numbers represent the positive end of the normative judgments.

Finally, three items tapped into intentions to cut in line: (1) “I would cut in line (ending at unlikely-likely).” (2) “If the opportunity came, I would be willing to cut in line (ending at disagree-agree).” (3) “If I had to choose between what to do and what not to do, I would choose to cut in line (ending at disagree-agree).” Higher scores on these scales suggest stronger behavioral intentions.

In sum, each of eight questionnaires assessed attitudes, perceived behavioral control, four normative judgments, and behavioral intentions.

To avoid response bias, participants responded to random configurations of all items except the semantic-differential scales measuring attitudes. To prevent order effects, students filled out sets of counterbalanced questionnaires.

### C. Procedure

The questionnaires were administered to groups ranging from 2 to 7 students. Participants came to the laboratory to participate in a study interested in “things students do at UMASS”. Participants first read and signed on informed consent forms, then read the instructions to the questionnaire and completed it. Upon finishing filling out the questionnaire, they were debriefed and thanked.

## CHAPTER III

### RESULTS

#### A. Preliminary Analyses

A preliminary analysis assessed the internal consistency of attitude, perceived behavioral control, and intention scales. It resulted in the deletion of one of the perceived behavioral control items— “if I wanted to I could...”— from every situation. After removing this item, alpha coefficients indicated good internal consistencies for all three variables in all eight situations, as shown in Tables 1- 4. Subsequently, mean indices were computed by averaging across each set of item scores representing attitude, perceived behavioral control, and intention. Thus, high values indicate more favorable attitude, greater perceived behavioral control, and stronger intention.

Upon establishing internal consistency and computing indices, I examined the standard deviations of attitude, perceived behavioral control, morality, permissibility, commonality, normality, and intention for every situation. I did this to reach a better interpretation of the regression coefficients given that I am dealing with ratios of dependent to independent variables. Small standard deviations in intentions would have the effect of increasing the value of all 6 independent variable coefficients within a given situation making some regression coefficients look more influential than they really are. Small standard deviations would also mean small sum of squares total. This in turn would also help the regression coefficients achieve significance because of the decrease in the size of the standard error of the estimate due to a decrease in the sum of squares due to error. Conversely, larger standard deviations in intentions than in attitudes, perceived behavioral control, morality, permissibility, commonality, and normality would lead to

smaller regression coefficients (i.e. it would flatten out their slopes). Inspection of Table 5 indicates that situation 4 has the smallest standard deviation in intention scores ( $SD = 1.09$ ), situation 5, 6 and 8 contain medium standard deviations in intention ( $SD = 1.46, 1.49, \text{ and } 1.69$ , respectively), and situation 1, 2, 3, and 7 have the largest standard deviation in intentions ( $SD = 1.83, 2.02, 1.96, \text{ and } 1.91$ , respectively).

Next, I assessed the tolerance level of all 6 independent variables in all eight situations. I found the tolerances to be satisfactory, as demonstrated in Table 6-9. Of all indicators, this is the most important one, because it reflects not only the size of the standard error of the regression coefficients but also the variance-covariance matrix of the coefficients. Low levels of tolerance indicate high correlations between independent variables. If high correlations it would mean two things. First, the constructs of interest are overlapping in meaning; that is, they do not discriminate between each other. Overlapping constructs signify that the same question is being asked with different words. In the present case, the constructs of interests are normative judgments. Second, low levels of tolerance would indicate that the matrix  $(X'X)^{-1}$ , (that is, the variance-covariance matrix of factors or the matrix of correlations, whichever is being used) is singular or approach singularity. A singular matrix, in turn, would make it impossible to arrive at the equation  $B = (X'X)^{-1}X'Y$  and, therefore, to solve for the matrix of regression coefficients  $B$ . In addition, low tolerances would indicate unstable standard errors of regression coefficients that, in turn, would complicate the interpretation of these coefficients. In short, the stability of the regression coefficients will be in question because multiple solutions for their regression equations will be likely; without stable

coefficients, little can be said of the relationship between normative judgments and behavioral intentions.

Unfortunately, examination of tolerances revealed high levels of this indicator for normative judgments of normality in all eight situations. The remaining three normative judgments reflected distinct psychological entities. The significance of this event is that although normative judgments of normality predict behavioral intention quite well, it is not necessary after considering the remaining three normative judgments. Given that normative judgments of morality, permissibility, and commonality readily predict normative judgments of normality, the latter must be close to a linear combination of the former. Being a linear combination of morality, permissibility, and commonality would mean that normative judgments of normality represents a dependent vector in the matrix of independent variables  $X$ , and that after solving for  $(X'X)^{-1}$ , it would yield closely infinite number of solutions. Since this appears to be the case, normative judgment of normality regression coefficients are not trustworthy. A second problem with this normative judgment is that it is so highly correlated with intention that it is difficult to empirically separate the two. Thus, two separate regression analyses were conducted: one with normative judgments of normality included and one with it excluded.

#### B. Rationale for the Analyses and Restatement of Hypotheses

Building on the framework of the theory of planned behavior it was predicted that, in conjunction with attitudes and perceived behavioral control, only one type of normative judgment should best predict intention to perform a given class of behavior. Hierarchical regression analysis is the appropriate statistical tool to test this hypothesis. Data were, consequently, submitted to hierarchical regression analyses in which

behavioral intentions acted as the criterion variable and attitudes, perceived behavioral control, morality, permissibility, commonality, and normality the predictor variables.

These six independent variables entered the regression model in the following order:

Situation 1 and 2 in which revealing the personal secrets of someone one knows to others and exchanging numbers with someone at a party even though one has a girlfriend or boyfriend are the behaviors of interest. I predicted that normative judgments of morality should be the strongest significant predictor. In line with the theory of planned behavior's traditional way of entering its constructs into hierarchical regression models, attitudes and normative judgment of morality came first in step 1. Step 2 consisted of perceived behavioral control. Lastly, step 3 included permissibility, commonality, and normality.

Situation 3 and 4 in which cutting in line and being late for a date are the behaviors of interest. I further predicted that normative judgments of permissibility should be able to predict intentions the best. As such, attitudes and normative judgment of permissibility entered in step 1. Step 2 included perceived behavioral control, and step 3 morality, commonality, and normality.

Situation 5 and 6 in which eating cake using the hands and being late for class are the behaviors of interest. I predicted for these two situations that normative judgments of commonality should have the strongest influence on intentions. Consistent with situation 1-4, attitudes and normative judgment of commonality came in step 1. Step 2 consisted of perceived behavioral control, and step 3 included morality, permissibility, and normality.

Situation 7 and 8 in which studying on a Saturday night and sitting in front of the class are the behaviors of interest. Finally, I predicted that normative judgment of

normality should be most strongly related to behavioral intentions. Thus, attitudes and normative judgment of normality took first place in step 1. Step 2 represented perceived behavioral control, and step 3 morality, permissibility, and commonality.

### C. Findings in which normative judgments of normality were included

Two major points emerged from the present results. First, normative judgments of morality, permissibility, commonality, and normality when accompanied by attitude and perceived behavioral control seemed to do a good job at predicting behavioral intentions. This limited model confirmed seven of the eight hypotheses of interest. For instance, the model demonstrated that intentions to cut in line and to arrive late to a first date depend on normative judgments of permissibility. However, once the remaining normative judgments were added to the limited model, more than one normative judgment predicted behavioral intentions. Therefore, the data did not completely support the expected covariation between specific normative judgments and given types of behavior. Second, the operationalization of normative judgments of normality proved to be inadequate. This finding obtain support from the observation that normative judgments of normality highly correlated with intentions and the other remaining normative judgments.

The idea of presenting two sets of hierarchical regression models given the suspicious nature of normative judgments of normality was further supported by the results. Normative judgments of normality (i.e., how typical a behavior is for a person) highly predicted behavioral intentions in all eight situations, its regression coefficients ranging from a low .31 to a high .62. Nevertheless, this high predictability is questionable on the grounds of poor tolerance levels and high normality-behavioral intentions correlations. It seems that normative judgments of normality overlap not only with

normative judgments of morality, permissibility, and commonality but also with behavioral intentions. This overlap means that morality, permissibility, and commonality capably predicts both normality and behavioral intentions. Hence, the operationalization of normality seems to be semantically similar to that of behavioral intentions, rendering the two constructs hardly distinguishable. Not surprisingly, an overall look at the results indicated support only for the hypotheses pertaining to normative judgments of normality.

As Tables 6-9 indicate, out of all the normative judgments, normality seemed to account for the most variance in intentions to perform every one of the behaviors of interest. Furthermore, although judgments of morality, permissibility, and commonality did influence intentions to perform various behaviors, in none of the eight situations did they predict behavioral intentions as strongly as normality. These results at first look suggest that a linear relationship between normative judgments of normality and behavioral intentions exists—such that the more typical people judge the behaviors in this study to be, the stronger their intentions to perform these behaviors are—however, this conclusion is misleading. To restate the position taken at this section's outset, a more plausible interpretation of the findings is that the operationalizations of normality and behavioral intentions are highly related, to the point of making the two constructs almost indistinguishable. A detailed report of the overall results follows.

The hypothesis that normative judgments of morality should best account for variance in intentions to reveal the personal secrets of a student to others and in intentions to exchange numbers with someone at a party even though they are in a committed relationship were not supported. Attitude and judgments of morality did seem useful in

predicting intentions to reveal a student's personal secret to others (58% of the explained variance) and to exchange numbers at a party regardless of being committed in a relationship (56% of the explained variance), they were not the only normative judgments accounting for variability in behavioral intentions. As seen in Table 6, permissibility (i.e. judgments regarding what is allowed) and normality (i.e. judgments concerning what feels normal to do) also accounted for substantial amounts of variance in intentions (19 %, situation 1 and 12% situation 2) in situation 1, 19%,  $F(1, 223) = 63.43, p < .05$ , and situation 2, 12%,  $F(1, 224) = 36.36, p < .05$ . Moreover, normality's significant regression coefficients of .61, in the case of revealing the personal secrets of a student to others, and .45, when it comes to exchanging numbers with someone at a party, clearly show a stronger relationship between this construct and intentions than morality's weak significant and non-significant coefficients (.12 and .02, respectively). This means that for every unit change in people's judgments of how normal the preceding two behaviors are there is a corresponding change of .61 and .45 units in behavioral intentions, compared to morality's change of .12 and .02. It seems that people's judgments of not only how moral but also of how allowed, common, and normal revealing a student's personal secrets and exchanging numbers at a party are important in predicting these behaviors. Moreover, normality predicts behavior better than morality. In short, the more moral, allowed, normal, and common revealing a student's personal secrets and exchanging numbers at a party are judged to be, the stronger the intention to perform these behaviors.

The construct permissibility should be the normative judgment most able to explain the amount of variability in intentions to cut in line and to be late for a first date.

These hypotheses were also not supported by the data. Table 7 shows that although the coefficients for permissibility were significant in the case of cutting in line,  $\underline{b} = .34$ ,  $t(224) = 3.9$ ,  $p < .05$ , and being late for a date,  $\underline{b} = .17$ ,  $t(223) = 4.3$ ,  $p < .05$ , suggesting a relationship between this variable and intentions, other normative judgments also accounted for variability in behavioral intentions. Specifically, while attitudes and permissibility accounted for 55% of variance in intentions to cut in line, normality,  $\underline{b} = .62$ ,  $t(224) = 10.80$ ,  $p < .05$ , was also able to account for 14% of variance,  $F(1, 224) = 40.17$ ,  $p < .05$ . With respect to intentions to be late for a date, attitudes and permissibility accounted for 27% of its variance, while morality,  $\underline{b} = -.12$ ,  $t(223) = -2.4$ ,  $p < .05$ , commonality,  $\underline{b} = .08$ ,  $t(223) = 2.7$ ,  $p < .05$ , and permissibility,  $\underline{b} = .31$ ,  $t(223) = 8.4$ ,  $p < .05$ , accounted for 21%,  $F(1, 223) = 63.43$ ,  $p < .05$ . What this means is that the more people viewed the behaviors cutting in line and arriving late to a first date as being allowed, the more they intend to perform these two actions, but people's intentions are also influenced by how moral, common, and, especially, how normal cutting in line and arriving late to a first date are believed to be.

Only the normative judgment of commonality should best account for variability in intentions to arrive late to a psychology class and to eat cake using the hands at a dinner party. The other three normative judgments should weakly predict intentions to carry out these behaviors. This hypothesis was not supported by the data. As indicated in Table 8, commonality's regression coefficients were significant in both cases, arriving late to a psychology class,  $\underline{b} = .20$ ,  $t(222) = 4.7$ ,  $p < .05$ , and eating cake using one's hands at a dinner party  $\underline{b} = .41$ ,  $t(224) = 8.8$ ,  $p < .05$ , indicating a linear relationship between this normative judgment and intentions. Together with attitudes this construct

accounted for 21% of variance in intentions to arrive late to psychology class and 59% in intentions to eat cake using one's hands at a dinner party. However, morality,  $\underline{b} = -.16$ ,  $t(222) = -2.2$ ,  $p < .05$ , commonality,  $\underline{b} = .09$ ,  $t(222) = 2.1$ ,  $p < .05$ , and normality,  $\underline{b} = .36$ ,  $t(222) = 7.4$ ,  $p < .05$ , were also able to account for 13% of the variability in intentions to arrive late to a psychology class,  $F(1, 222) = 21.10$ ,  $p < .05$ ; and normality,  $\underline{b} = .42$ ,  $t(224) = 7.9$ ,  $p < .05$ , accounted for 6% of the variability in intentions to arrive late to a first date,  $F(1, 224) = 21.33$ ,  $p < .05$ . In conclusion, prediction of intentions to arrive late to a psychology class and to eat cake using one's hands at a dinner party from knowing how common these behaviors are thought to be is possible, but other types of normative judgments should also be taken into account, notably, normative judgments of normality.

Finally, only normative judgments of normality should best account for variance in intentions to study on a Saturday night and to sit in front of the class. These were the only set of hypotheses supported by the data. Table 9 shows that, in conjunction with attitudes, normative judgments of normality accounted for 66% of variance in intentions to study on a Saturday night and 77% of variance in intentions to sit in front of the class. Only normality's regression coefficients were significant in both cases, studying on a Saturday night,  $\underline{b} = .59$ ,  $t(224) = 10.12$ ,  $p < .05$ , and sitting in front of the class,  $\underline{b} = .50$ ,  $t(224) = 12.9$ ,  $p < .05$ , indicating that knowing how normal people feel about studying on a Saturday night and sitting in front of the class is enough to predict their intentions to perform these two behaviors.

#### D. Findings in which normative judgments of normality were excluded

Since normative judgments of normality overlapped with both the criterion variable and other predictors, this variable might have suppressed or veiled the effect of

all other normative judgments on behavioral intentions. Therefore, the construction of a model containing only normative judgments of morality, permissibility, and commonality served to assess the impact of normative judgments of normality on the present study.

Three important findings arose from this modified model. First, revealing the personal secrets of an acquaintance to a friend was the only behavior guided by more than one normative judgment (morality, permissibility, and commonality). The rest of the behaviors depended exclusively on either normative judgment of permissibility or commonality. In fact, commonality single-handedly accounted for variance in intentions to carry out five of the behaviors—one behavior expected to be influenced by permissibility, two by commonality, and two by normality. More specifically, people's perceptions of how common or uncommon the behaviors arriving late to a first date, eating cake with the hands, arriving late to a psychology class, studying on a Saturday night, and sitting in front of the class independently determined their intentions to engage in these actions. In comparison, normative judgments of permissibility by themselves explained variability in intentions to perform only two behaviors: exchanging numbers with someone at a party even though one is in a committed relationship (a behavior previously expected to be influenced by normative judgments of morality) and cutting in line.

The second finding of interest in the present study is that even though permissibility and commonality independently impacted seven of the eight behaviors, the increases in the amount of variance accounted for by these two normative judgments were negligible—between 2% and 5 % increase (12% in only one case: arriving late to a first date). This indicates that the additive benefit of permissibility and commonality is

minimal compared with the effects of the original normative judgments. That is, the model consisting of attitude, perceived behavioral control, and a normative judgment (i.e., target predictor) benefits little or none from the addition of the remaining normative judgments.

Third, even though normative judgments of morality have successfully predicted a wide variety of behaviors in the past, it was able to predict only one behavior in the present study. In fact, morality at first sight appeared to be negatively related to behaviors that were not expected to relate to this judgment at all, such as arriving late to a date and arriving late to a psychology class. However this anomaly is due to a spurious relationship, one created by a negatively skewed distribution for morality and a positively skewed distribution for behavioral intentions. The nature of the morality score distribution arose out of a restricted range extending from 1 = morally wrong through 4 = does not apply in which most people chose a four. Therefore, most people viewed morality as having little or nothing to do with arriving late to a date or arriving late to a psychology class.

## CHAPTER IV

### DISCUSSION

The most important insights gained from the present study are threefold. First, in conjunction with attitudes and perceived behavioral control, all normative judgments seem to do an OK job at predicting behavioral intentions once normative judgments of normality were taken out of the model. The assumption that each normative judgment should best predict behavior of a particular kind and, consequently, predict poorly behavior of a different kind, received preliminary empirical support only for one of the target behaviors. That is, normative judgments of morality, permissibility, and commonality predicted well only one of its two corresponding behaviors. This support took the form of high regression coefficients and good levels of explained variance for those normative judgments expected to account for variability in target behavioral intention. Further support included insignificant amounts of explained variance accounted by those extra normative judgments not expected to contribute much to the prediction of intentions. Once the normative judgment of interest entered the model, the rest of the normative judgments offered little or no help in accounting for the left-over unexplained variability in intentions (see Tables 10-13).

Second, care must be taken when operationalizing normative judgments of normality such that this construct does not overlap with behavioral intentions. Here the advice is to use the bipolar adjective normal/abnormal, comfortable/uncomfortable, or fitting/unfitting when operationalizing the construct. One example bearing on this suggestion is to ask subjects whether performing a particular behavior feels normal or abnormal to them.

Third and the most important of all the findings obtained in the present study is that not all judgments covary with all types of behaviors. There seems to be a one-to-one privileged relationship between certain kinds of normative judgments and specific classes of behavioral intentions. For instance, normative judgments of morality predicted well only those behaviors identified in a pilot study as having something to do with moral standards. However, when it came to customary, everyday behaviors, such as eating cake using one's hands, most people reported that morality just did not apply to these types of behaviors. In other words, morality did not at all play a role in the judging of certain types of actions. In contrast, the normative judgments that would most reasonably seem to predict customary behavior, commonality, predicted well these simple behaviors.

The above observations might come as no surprise, but their implications are not trivial for the science of psychology. They suggest that one of the principal tasks of social psychologists is to discover what it is about particular behaviors that is responsible for creating one-to-one relationships between these actions and a given class of judgments. This would mean more time spent on the identification, description, cataloguing, and organization of clusters of behavioral features believed to correspond to the evocation of specific judgments. Obviously this task is not a simple one, for it would be equivalent to any other grand classificatory endeavor, such as the periodic table of the elements in chemistry, classification of atomic particles in physics, and the taxonomy of life in biology. Nevertheless, in the long run, the identification and classification of those features of action underlying certain behavior-judgment covariations could prove priceless to researchers and theorists alike.

In the same vein, classificatory systems of judgments would help researchers better understand various psychological relationships. As this study demonstrates, psychological constructs, at first look, appear rather simple, unitary, abstract entities, but upon closer inspection their multifaceted nature reveals itself. Even something as widespread, well known, and ubiquitous in social psychology as norms readily breaks down into a multitude of normative judgments, each responsible for influencing certain classes of actions. This suggests that perhaps most psychological variables exist in hierarchical webs consisting of general to specific concepts (Fiske & Neuberg, 1990), and that the use of any one construct should be carried out after arriving at a careful understanding of where that concept fits in its conceptual web. It could be the case that normative judgments exist as derivations of more general constructs (i.e., higher order), such as subjective norms, and, therefore, that predicting behavior from normative judgments versus more general concepts would drastically lead to very different results.

Taken together, the last two paragraphs contain speculations analogous to the principle of compatibility advanced in the area of attitudes stating that strong judgment-behavior correlation is best obtained when the two, judgment and behavior, match with respect to a number of features (e.g., context, time, etc.; Ajzen, 1985). In the same manner, bringing together the idea of an exhaustive classificatory system involving behavioral attributes and the notion of a general-to-specific web of concepts would help identify compatible one-to-one relationships between distinct types of judgments and classes of behavior. For instance, according to the present study, the performance of the behavior revealing the personal secrets of an acquaintance to someone you know depends on how moral or immoral this action is perceived to be. This one-to-one relationship must

be a by-product of the place held by normative judgment of morality in a general-to-specific conceptual web together with those aspects of this behavior responsible for the strength of the judgment-behavior bond. If a construct higher in the conceptual scheme were applied to the same behavior, perhaps fewer or greater number of behavioral attributes would have to be taken into consideration than when a more concrete normative construct, such as morality, was the object of study. In sum, a different principle of compatibility would stress the importance of both, the characteristics of the behavior and the conceptual nature of the psychological variable in question.

Furthermore, it is highly probable that constructs high in the conceptual web become more abstract and harder to verbalize resulting in almost preconscious application of these constructs to their objects. This would mean that because concepts lower in the web are more concrete, clearer in consciousness and, thus, easily expressed, selecting them when using subjects' conscious self-reports as means to collecting data would provide more accurate information. This might be the reason morality predicted only one behavior in this study, and, even then, two other normative judgments accompanied it in its prediction. Morality is one of those concepts that everyone knows what it is when they see it, but no one knows what it means when they are asked. Permissibility, comparatively, predicted a wider range of behaviors, including one of the actions that morality was supposed to predict, perhaps because people have less trouble grasping its meaning or because they use this concept more often in their everyday life. Commonality, likewise, seems to be a well-understood, readily accessible construct. Thus, given that some normative judgments may reside lower in the conceptual web (i.e.,

they are more concrete) than other normative constructs, they likely provide richer and more accurate information.

This thesis hopefully lays the groundwork for a different way of conceptualizing the norm construct. Although the ideas contain seem counterintuitive to everyday ways of thinking about norms, they represent just another piece in the normative puzzle. Taken together with other examined aspects of norms, such as interpersonal perceptions (descriptive and injunctive norms), specific rules and regulations (personal norms), and unconscious processes (habits), normative judgments could add a valuable missing link to the understanding of the relationship between norms and behavior.

Table 1

Reliabilities and Intercorrelations Among Intention, Normative Judgments of Morality, Permissibility, Commonality, and Normality, Attitude, and Perceived Behavioral Control (PBC): Situation 1 (n = 230 ) and 2 (n = 231)

Variables	1	2	3	4	5	6	7
Revealing the personal secrets of someone you know to others							
1. Intention	<b>.91</b>						
2. Morality	.60						
3. Permissibility	.63	.54					
4. Commonality	.48	.30	.47				
5. Normality	.85	.56	.60	.49			
6. Attitude	.71	.51	.58	.38	.66	<b>.85</b>	
7. PBC	.38	.27	.41	.40	.43	.32	<b>.77</b>

Exchanging numbers with someone at a party

1. Intention	<b>.95</b>						
2. Morality	.47						
3. Permissibility	.55	.47					
4. Commonality	.47	.27	.45				
5. Normality	.79	.39	.45	.43			
6. Attitude	.74	.52	.48	.48	.58	<b>.87</b>	
7. PBC	.68	.43	.47	.41	.66	.32	<b>.85</b>

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

Bold numbers represent alpha coefficient levels (i.e., internal consistency).

Table 2

Reliabilities and Intercorrelations Among Intention, Normative Judgments of Morality, Permissibility, Commonality, and Normality, Attitude, and Perceived Behavioral Control (PBC): Situation 3 (n = 231) and 4 (n = 230)

Variables	1	2	3	4	5	6	7
Cutting in line							
1. Intention	<b>.90</b>						
2. Morality	.44						
3. Permissibility	.62	.53					
4. Commonality	.35	.21	.38				
5. Normality	.84	.46	.63	.37			
6. Attitude	.69	.42	.58	.35	.68	<b>.86</b>	
7. PBC	.62	.32	.48	.46	.60	.49	<b>.84</b>
Arriving late to a first date							
1. Intention	<b>.72</b>						
2. Morality	.14						
3. Permissibility	.42	.38					
4. Commonality	.53	.23	.44				
5. Normality	.70	.19	.34	.55			
6. Attitude	.47	.36	.44	.32	.36	<b>.87</b>	
7. PBC	.51	.21	.39	.44	.64	.33	<b>.80</b>

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

Bold numbers represent alpha coefficient levels (i.e., internal consistency).

Table 3

Reliabilities and Intercorrelations Among Intention, Normative Judgments of Morality, Permissibility, Commonality, and Normality, Attitude, and Perceived Behavioral Control (PBC): Situation 5 (n = 229) and 6 (n = 231)

Variables	1	2	3	4	5	6	7
Arriving late to a psychology class							
1. Intention	<b>.68</b>						
2. Morality	.01						
3. Permissibility	.30	.25					
4. Commonality	.35	.12	.39				
5. Normality	.64	.07	.19	.37			
6. Attitude	.37	.19	.37	.24	.36	<b>.80</b>	
7. PBC	.52	.20	.30	.33	.56	.32	<b>.74</b>
Eating cake using one's hands at a dinner party							
1. Intention	<b>.74</b>						
2. Morality	.40						
3. Permissibility	.62	.45					
4. Commonality	.68	.29	.68				
5. Normality	.80	.33	.63	.64			
6. Attitude	.67	.47	.64	.55	.67	<b>.88</b>	
7. PBC	.70	.43	.62	.56	.68	.61	<b>.83</b>

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

Bold numbers represent alpha coefficient levels (i.e., internal consistency).

Table 4

Reliabilities and Intercorrelations Among Intention, Normative Judgments of Morality, Permissibility, Commonality, and Normality, Attitude, and Perceived Behavioral Control (PBC): Situations 7 (n = 231) and 8 (n = 231)

Variables	1	2	3	4	5	6	7
Studying on a Saturday night							
1. Intention	<b>.82</b>						
2. Morality	.20						
3. Permissibility	.31	.19					
4. Commonality	.49	.17	.21				
5. Normality	.77	.22	.24	.52			
6. Attitude	.57	.26	.35	.37	.46	.77	
7. PBC	.60	.11	.37	.38	.63	.48	.96
Sitting in front of the class							
1. Intention	<b>.85</b>						
2. Morality	.23						
3. Permissibility	.28	.23					
4. Commonality	.39	.08	.30				
5. Normality	.86	.22	.17	.35			
6. Attitude	.73	.33	.34	.35	.71	.83	
7. PBC	.67	.11	.28	.35	.64	.58	.83

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

Bold numbers represent alpha coefficient levels (i.e., internal consistency).

Table 5  
Means and Standard Deviations for Intention, Attitude, Perceived Behavioral Control, and Normative Judgments of Morality, Permissibility, Commonality, and Normality in Situation 1 through Situation 7

Variable	<u>Situation 1</u>		<u>Situation 2</u>		<u>Situation 3</u>		<u>Situation 4</u>		<u>Situation 5</u>		<u>Situation 6</u>		<u>Situation 7</u>		<u>Situation 8</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Intention	3.1	1.8	4.2	2.0	3.6	2.0	1.8	1.1	2.6	1.5	2.3	1.5	2.8	1.9	5.3	1.7
Attitude	3.0	1.2	3.7	1.3	3.5	1.3	2.2	1.1	2.4	1.0	2.1	1.1	3.7	1.2	5.0	1.3
PBC	2.6	1.6	3.8	2.0	3.7	1.9	2.9	1.9	3.8	2.0	2.9	2.1	4.2	1.6	5.6	1.8
Morality	3.1	1.8	2.9	1.3	2.8	1.4	3.2	1.1	3.4	1.1	3.1	1.2	5.1	1.4	4.7	1.3
Perm	3.2	1.8	3.9	1.9	3.3	1.8	3.0	1.7	3.5	1.9	2.5	1.6	5.3	1.8	6.4	1.3
Com	3.8	1.9	5.2	1.8	4.7	1.9	2.9	2.0	4.3	2.1	2.1	1.6	2.2	1.5	4.8	1.9
Norm	3.9	1.8	3.6	2.0	2.8	1.8	2.3	1.8	2.5	1.8	1.9	1.6	2.6	1.8	4.5	2.1

Note. Perm = permissibility; Com = commonality; Norm = normality

Table 6  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral Intentions: Situation 1 (n = 230 ) and 2 (n = 231)

Variable	Revealing the personal secrets of a student to others					Exchanging numbers with someone at a party				
	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>
Step 1										
Attitude	.71	<b>.79*</b>	.07		.74	.74	<b>1.0*</b>	.08		.73
Morality	.60	<b>.33*</b>	.05	<b>.58</b>	.74	.47	<b>.18*</b>	.08	<b>.56</b>	.73
Step 2										
Attitude	.71	<b>.74*</b>	.07		.70	.74	<b>.76*</b>	.08		.57
Morality	.60	<b>.32*</b>	.05		.73	.47	<b>.08</b>	.08		.71
PBC	.38	<b>.15*</b>	.05	<b>.60**</b>	.88	.68	<b>.38*</b>	.05	<b>.65**</b>	.64
Step 3										
Attitude	.71	<b>.29*</b>	.07		.50	.74	<b>.52*</b>	.07		.48
Mor	.60	<b>.12*</b>	.04		.61	.47	<b>.02</b>	.06		.65
PBC	.38	<b>-.02</b>	.04		.75	.68	<b>.13*</b>	.05		.48
Per	.63	<b>.09*</b>	.04		.50	.55	<b>.12*</b>	.04		.62
Com	.47	<b>.03</b>	.04		.68	.47	<b>.01</b>	.04		.69
Norm	.85	<b>.61*</b>	.50	<b>.78**</b>	.42	.79	<b>.45*</b>	.05	<b>.76**</b>	.49

Note. r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \* $p < .05$ . \*\*significant change in R<sup>2</sup>,  $p < .05$ .

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = normality

Table 7  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral Intentions: Situation 3 (n = 231) and 4 (n = 230)

Variable	Cutting in line					Arriving late to a first date				
	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>
Step 1										
Attitude	.69	<b>.76*</b>	.08		.66	.47	<b>.36*</b>	.07		.81
Perm	.62	<b>.34*</b>	.06	<b>.55</b>	.66	.42	<b>.17*</b>	.04	<b>.27</b>	.81
Step 2										
Attitude	.69	<b>.61*</b>	.08		.60	.47	<b>.28*</b>	.06		.78
Perm	.62	<b>.25*</b>	.06		.61	.42	<b>.10*</b>	.04		.74
PBC	.62	<b>.31*</b>	.05	<b>.61**</b>	.70	.51	<b>.20*</b>	.03	<b>.34**</b>	.82
Step 3										
Attitude	.69	<b>.28*</b>	.18		.49	.47	<b>.23*</b>	.05		.72
Perm	.62	<b>.08</b>	.07		.49	.42	<b>.07*</b>	.03		.65
PBC	.62	<b>.15*</b>	.05		.56	.51	<b>.01</b>	.03		.55
Mor	.44	<b>.02</b>	.06		.69	.14	<b>-.12*</b>	.05		.81
Com	.35	<b>-.04</b>	.04		.75	.53	<b>.08*</b>	.03		.62
Norm	.84	<b>.62*</b>	.06	<b>.75**</b>	.39	.70	<b>.31*</b>	.04	<b>.59**</b>	.49

Note. r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \* $p < .05$ . \*\*significant change in R<sup>2</sup>,  $p < .05$ .

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = normality

Table 8  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral Intentions: Situation 5 (n = 229) and 6 (n = 231)

Variable	Arriving late to a psychology class					Eating cake using one's hands at a dinner party				
	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>
Step 1										
Attitude	.37	<b>.46*</b>	.09		.94	.67	<b>.56*</b>	.07		.70
Com	.35	<b>.20*</b>	.04	<b>.21</b>	.94	.68	<b>.41*</b>	.05	<b>.59</b>	.70
Step 2										
Attitude	.37	<b>.30*</b>	.09		.88	.67	<b>.37*</b>	.07		.56
Com	.35	<b>.12*</b>	.04		.87	.68	<b>.31*</b>	.05		.62
PBC	.52	<b>.29*</b>	.04	<b>.34**</b>	.83	.70	<b>.24*</b>	.04	<b>.65**</b>	.56
Step 3										
Attitude	.37	<b>.16</b>	.08		.77	.67	<b>.17*</b>	.07		.43
Com	.35	<b>.04</b>	.04		.76	.68	<b>.21*</b>	.05		.46
PBC	.52	<b>.15*</b>	.04		.63	.70	<b>.12*</b>	.04		.44
Mor	.01	<b>-.16*</b>	.07		.91	.40	<b>.07</b>	.05		.71
Perm	.30	<b>.09*</b>	.04		.73	.62	<b>-.03</b>	.05		.40
Norm	.64	<b>.36*</b>	.05	<b>.49**</b>	.61	.80	<b>.42*</b>	.05	<b>.73**</b>	.38

Note. r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \* $p < .05$ . \*\*significant change in R<sup>2</sup>,  $p < .05$ .

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = normality

Table 9  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral  
Intentions: Situations 7 (n = 231) and 8 (n = 231)

Variable	r	Studying on a Saturday night					Sitting in front of the class				
		<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	r	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	
Step 1											
Attitude	.57	<b>.44*</b>	.07		.78	.73	<b>.32*</b>	.06		.50	
Norm	.77	<b>.68*</b>	.05	<b>.66</b>	.78	.86	<b>.55*</b>	.04	<b>.77</b>	.50	
Step 2											
Attitude	.57	<b>.40*</b>	.07		.73	.73	<b>.26*</b>	.06		.47	
Norm	.77	<b>.63*</b>	.05		.57	.86	<b>.49*</b>	.04		.42	
PBC	.60	<b>.12*</b>	.06	<b>.66**</b>	.56	.67	<b>.16*</b>	.04	<b>.78**</b>	.56	
Step 3											
Attitude	.57	<b>.36*</b>	.08		.66	.73	<b>.22*</b>	.06		.41	
Norm	.77	<b>.59*</b>	.06		.48	.86	<b>.50*</b>	.04		.40	
PBC	.60	<b>.11</b>	.07		.52	.67	<b>.14*</b>	.04		.53	
Mor	.20	<b>-.02</b>	.06		.90	.23	<b>.00</b>	.04		.86	
Perm	.31	<b>.06</b>	.05		.81	.28	<b>.08</b>	.04		.80	
Com	.49	<b>.08</b>	.06	<b>.66</b>	.70	.39	<b>.03</b>	.03	<b>.79</b>	.80	

Note. r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \*p < .05. \*\*significant change in R<sup>2</sup>, p < .05.

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = normality

Table 10  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral Intentions Excluding Normative Judgments of Normality: Situation 1 (n = 230 ) and 2 (n = 231)

Variable	Revealing the personal secrets of a student to others					Exchanging numbers with someone at a party				
	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>
Step 1										
Attitude	.71	<b>.79*</b>	.07		.74	.74	<b>1.0*</b>	.08		.73
Mor	.60	<b>.33*</b>	.05	<b>.58</b>	.74	.47	<b>.18*</b>	.08	<b>.56</b>	.73
Step 2										
Attitude	.71	<b>.74*</b>	.07		.70	.74	<b>.76*</b>	.08		.57
Mor	.60	<b>.32*</b>	.05		.73	.47	<b>.08</b>	.08		.71
PBC	.38	<b>.15*</b>	.05	<b>.60**</b>	.88	.68	<b>.38*</b>	.05	<b>.65**</b>	.64
Step 3										
Attitude	.71	<b>.60*</b>	.08		.60	.74	<b>.69*</b>	.08		.51
Mor	.60	<b>.25*</b>	.05		.65	.47	<b>.02</b>	.08		.65
PBC	.38	<b>.06</b>	.05		.77	.68	<b>.33*</b>	.05		.60
Perm	.63	<b>.17*</b>	.06		.51	.55	<b>.16*</b>	.05		.63
Com	.47	<b>.13*</b>	.05	<b>.64**</b>	.72	.47	<b>.05</b>	.05	<b>.67**</b>	.70

Note . r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \* $p < .05$ . \*\*significant change in R<sup>2</sup>,  $p < .05$ .

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = normality

Table 11  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral Intentions Excluding Normative Judgments of Normality: Situation 3 (n = 231) and 4 (n = 230)

Variable	Cutting in line					Arriving late to a first date				
	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>
Step 1										
Attitude	.69	.76*	.08		.66	.47	.36*	.07		.81
Perm	.62	.34*	.06	.55	.66	.42	.17*	.04	.27	.81
Step 2										
Attitude	.69	.61*	.08		.60	.47	.28*	.06		.78
Perm	.62	.25*	.06		.61	.42	.10*	.04		.74
PBC	.62	.31*	.05	.61**	.70	.51	.20*	.03	.34**	.82
Step 3										
Attitude	.69	.60*	.08		.59	.47	.29*	.06		.73
Perm	.62	.22*	.06		.52	.42	.06	.04		.65
PBC	.62	.31*	.05		.63	.51	.15*	.03		.74
Mor	.44	.10	.07		.70	.14	-.13*	.06		.81
Com	.35	-.02	.05	.62**	.75	.53	.18*	.03	.46**	.71

Note. r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \* $p < .05$ . \*\*significant change in R<sup>2</sup>,  $p < .05$ .

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = normality

Table 12  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral Intentions Excluding Normative Judgments of Normality: Situation 5 (n = 229) and 6 (n = 231)

Variable	Arriving late to a psychology class					Eating cake using one's hands at a dinner party				
	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>
Step 1										
Attitude	.37	<b>.46*</b>	.09		.94	.67	<b>.56*</b>	.07		.70
Com	.35	<b>.20*</b>	.04	<b>.21</b>	.94	.68	<b>.41*</b>	.05	<b>.59</b>	.70
Step 2										
Attitude	.37	<b>.30*</b>	.09		.88	.67	<b>.37*</b>	.07		.56
Com	.35	<b>.12*</b>	.04		.87	.68	<b>.31*</b>	.05		.62
PBC	.52	<b>.29*</b>	.04	<b>.34**</b>	.83	.70	<b>.24*</b>	.04	<b>.65**</b>	.56
Step 3										
Attitude	.37	<b>.30*</b>	.09		.81	.67	<b>.35*</b>	.07		.43
Com	.35	<b>.11*</b>	.04		.80	.68	<b>.31*</b>	.05		.46
PBC	.52	<b>.30*</b>	.04		.81	.70	<b>.23*</b>	.04		.44
Mor	.01	<b>-.20*</b>	.08		.91	.40	<b>.04</b>	.05		.71
Perm	.30	<b>.06</b>	.05	<b>.36**</b>	.74	.62	<b>.06</b>	.05	<b>.65</b>	.40

Note. r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \* $p < .05$ . \*\*significant change in R<sup>2</sup>,  $p < .05$ .

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = normality

Table 13  
Summary of Hierarchical Regression Analyses for Variables Predicting Behavioral Intentions Excluding Normative Judgments of Normality: Situations 7 (n = 231) and 8 (n = 231)

Variable	Studying on a Saturday night					Sitting in front of the class				
	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>	<u>r</u>	<u>b</u>	<u>SE(b)</u>	<u>R<sup>2</sup></u>	<u>Tol</u>
Step 1										
Attitude	.57	<b>.44*</b>	.07		.78	.73	<b>.32*</b>	.06		.50
Norm	.77	<b>.68*</b>	.05	<b>.66</b>	.78	.86	<b>.55*</b>	.04	<b>.77</b>	.50
Step 2										
Attitude	.57	<b>.40*</b>	.07		.73	.73	<b>.26*</b>	.06		.47
Norm	.77	<b>.63*</b>	.05		.57	.86	<b>.49*</b>	.04		.42
PBC	.60	<b>.12*</b>	.06	<b>.66**</b>	.56	.67	<b>.16*</b>	.04	<b>.78**</b>	.56
Step 3										
Attitude	.57	<b>.47*</b>	.09		.68	.73	<b>.64*</b>	.06		.41
PBC	.60	<b>.44*</b>	.07		.68	.67	<b>.34*</b>	.04		.53
Mor	.20	<b>.06</b>	.07		.91	.23	<b>.04</b>	.04		.86
Perm	.31	<b>.03</b>	.06		.81	.28	<b>-.02</b>	.04		.80
Com	.49	<b>.28*</b>	.07	<b>.51**</b>	.80	.39	<b>.04*</b>	.03	<b>.63**</b>	.80

Note. r = correlation coefficient; b = estimated unstandardized regression coefficient; SE(b) = estimated standard error of regression coefficients; R<sup>2</sup> = Squared multiple correlation coefficient. \* $p < .05$ . \*\*significant change in R<sup>2</sup>,  $p < .05$ .

Note. Mor = morality; Perm = permissibility; Com = commonality; Norm = Normality

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