

Chapter 7

Formation of Intentions

In the preceding two chapters we examined factors influencing the formation of beliefs and attitudes and showed that attitudes are determined by a person's salient beliefs. The present chapter is concerned with the formation of intentions. We have defined intention as a person's location on a subjective probability dimension involving a relation between himself and some action. A behavioral intention, therefore, refers to a person's subjective probability that he will perform some behavior.

In Chapter 2 we noted that intentions have frequently been subsumed under the concept of attitude and that no distinction between attitude and intention has usually been made. This point of view implies a strong relation between attitudes and intentions. The usual assumption is that the more favorable a person's attitude toward some object, the more he will intend to perform positive behaviors (and the less he will intend to perform negative behaviors) with respect to that object.

The present chapter will first review some of the research that has dealt with the relation between a person's attitude and his intention to perform some behavior. We shall see that there is little evidence in support of such a relation. This is not unexpected from the point of view of our conceptual framework. Although we view a person's attitude toward an object to be related to the totality of his intentions with respect to the object, there is no necessary relation between his attitude and any given intention.

To gain a better understanding of the relation between attitude and intention, we shall then examine the concept of intention in greater detail. We shall see that intentions vary in specificity and that there are systematic patterns of relations among intentions. Following this analysis, we shall discuss a theoretical model for the prediction of intentions. The broad outline of our conceptual framework in Chapter 1 indicated that according to this model, a person's intention to per-

form a behavior is determined by two factors: his attitude toward the behavior and his subjective norm concerning that behavior. Following exposition of the model, we shall review some of the relevant empirical evidence.

The chapter will conclude with a discussion of research dealing with the effects of other variables on intentions. We shall try to show how the findings obtained in the research can be interpreted within our conceptual framework.

ATTITUDES AND INTENTIONS

Intentions have often been viewed as the "conative component of attitude," and it has usually been assumed that this conative component is related to the attitude's affective component. This conceptualization has led to the assumption of a strong relation between attitudes and intentions. Until recently, the conative component of attitude has been submitted to little empirical investigation, and the relation between attitude and intention has been largely neglected. However, many investigations designed to study the relation between attitude and behavior have actually not observed behavior but have instead used measures of behavioral intentions as their criteria. These studies provide some information about the attitude-intention relation.

Evidence concerning the attitude-intention relation. A series of investigations have obtained measures of subjects' attitudes toward blacks and have asked the subjects to indicate their willingness to be photographed with a black person and to sign release forms for the photographs. Although the signing of a release form has usually been viewed as an overt behavior, to regard it as an intention seems more appropriate since the photographs are not taken and the releases are therefore hypothetical (see Ajzen *et al.*, 1970).

In the first study of this series (DeFleur and Westie, 1958), subjects high and low in prejudice toward blacks were asked to indicate their willingness to pose for a photograph with a Negro person of the opposite sex. Irrespective of their response, they were then shown seven "standard photographic release agreements" which consisted of a graded series of situations in which the photographs might be used. Subjects could sign as many of the agreements as they saw fit. The complete form used is presented in Table 7.1. Note that the release agreements represent situational variations in terms of the amount of publicity the photograph would receive. DeFleur and Westie found a low but significant relation between attitudes toward blacks and the number of photographic releases that subjects signed.

Several subsequent investigations have also used the picture-release technique. In an attempt to replicate and extend the DeFleur and Westie study, Linn (1965) found no significant relation between attitudes and intentions. Similarly, studies by Darroch (1971) and J. A. Green (1972) have also revealed nonsigni-

Table 7.1 Photographic Release Agreements (Adapted from DeFleur and Westie, 1958)

I will pose for a photograph (of the same type as in the experiment) with a Negro person of the opposite sex with the following restrictions on its use:

1. I will allow this photograph to be used in laboratory experiments where it will be seen only by professional sociologists.

Signed _____

2. I will allow this photograph to be published in a technical journal read only by professional sociologists.

Signed _____

3. I will allow this photograph to be shown to a few dozen university students in a laboratory situation.

Signed _____

4. I will allow this photograph to be shown to hundreds of university students as a teaching aid in sociology classes.

Signed _____

5. I will allow this photograph to be published in the student newspaper as part of a publicity report on this research.

Signed _____

6. I will allow this photograph to be published in my hometown newspaper as part of a publicity report on this research.

Signed _____

7. I will allow this photograph to be used in a nationwide publicity campaign *advocating racial integration*.

Signed _____

ficant or low relations between attitudes toward blacks and intentions to release photographs with a black person.

Many other investigators have reported low and nonsignificant relations between attitudes and intentions. For example, Nemeth (1970) reported a correlation of .008 between liking for a person and volunteering to distribute questionnaires for him. Similarly, Fishbein and Ajzen (1974) correlated different

measures of attitude toward religion with each of 100 intentions to perform various religious behaviors (e.g., donate money to a religious institution, pray before or after meals, take a religious course for credit). The average correlation between attitude and intentions was found to be .17. Novak and Lerner (1968) manipulated perceived similarity with another person and either indicated or did not indicate that the other person was emotionally disturbed. Although subjects always had a more favorable attitude toward the similar than the dissimilar person, they were more willing to interact with the dissimilar normal than with the similar disturbed. It should thus be clear that a person's attitude toward an object is not necessarily related to his intention to perform a given behavior with respect to, or in the presence of, that object.

Specific intentions versus sets of intentions. In Chapter 3 we showed that a person's attitude toward an object can be measured by considering a large set of his intentions with respect to that object. As with beliefs, statements of intentions can be used to construct an attitude scale by applying some standard scaling procedure. The resulting attitude score represents the person's general favorableness toward the attitude object. For example, there is considerable evidence that the Bogardus Social Distance Scale and Guttman scales based on intentional items correlate highly with other measures of attitude. Similarly, several studies have found that attitudes correlate highly with indices based on responses to Triandis's behavioral differential (e.g., Fishbein, 1964, 1967b).

Indeed, the relation between attitude and a set of intentions can be expressed in terms of an equation similar to the expectancy-value model for the relation between attitude and beliefs.

$$A = \sum_{i=1}^n I_i e_i. \quad (7.1)$$

In Eq. 7.1, A is the attitude toward some object; I_i is the intention to perform behavior i ; e_i is the evaluation of behavior i ; and n is the number of intentions. In contrast to our assumption of a causal link between beliefs and attitude, intentions are not assumed to determine attitudes. However, it is possible to view attitude as the determinant of the overall favorability of a person's intentions. Attitude is not assumed to determine any given intention, but it should influence the general level of favorability expressed by the person's intentions, whatever those intentions might be. Thus two persons may have the same attitude toward religion, but they may hold different intentions concerning religious behaviors. One person might intend to attend church regularly and to pray before meals, but not to donate money to his church or to sing in the church choir. The other person might intend to attend church regularly and to donate money to his church, but not to pray before meals or to sing in the church choir. The overall favorability expressed by their respective sets of intentions is approximately the same and corresponds to their attitudes.

In an attempt to test the relation between attitude and specific intentions on the one hand and sets of intentions on the other, Fishbein and Ajzen (1974) asked subjects to indicate whether they would or would not perform each of 100 behaviors that had previously been judged as indicating either a favorable or an unfavorable religious attitude. Taking this evaluation of the behavior into account, they computed an index by summing across responses to all 100 intentions. In addition, subjects filled out five traditional verbal measures of attitude toward religiosity (a self-report scale, a semantic differential, and Likert, Guttman, and Thurstone scales). The correlations between these measures of attitude and the index based on the 100 intentions ranged from .60 to .75. In marked contrast, the average correlation between attitude and single intentions ranged from .16 to .20 for the different attitude scales.

In conclusion, there appears to be no systematic relation between attitudes and intentions. Although attitudes tend to correlate highly with indices based on sets of intentions, the relation between attitude and single intentions is usually low and nonsignificant. To gain a better understanding of the relation between attitudes and intentions, it may be necessary to examine the nature of intentions in greater detail.

Specificity of Intentions

Intentions involve four different elements: the *behavior*, the *target* object at which the behavior is directed, the *situation* in which the behavior is to be performed, and the *time* at which the behavior is to be performed. Each of these elements varies along a dimension of specificity. At the most specific level, a person intends to perform a particular act with respect to a given object in a specified situation at a given point in time. For example, a person may intend to *have a drink* (behavior) with *George* (target) in *Harry's Pub* (situation) at *5 o'clock this afternoon* (time). At the most general level the person may simply intend to be gregarious (without reference to any specific behavior, target, situation, or time). It is relatively easy to identify the levels of specificity on the target, situation, and time dimensions, but the behavioral dimension poses greater difficulty.

Specificity of Target, Situation, and Time.

Intentions can be held with respect to a particular object (Ted Kennedy), a class of objects (politicians, Democrats), or any object (people in general). Similarly, with respect to situations, a person may intend to perform a behavior in a given situation or location (Henry's Pub), a class of locations (bars) or any location. Finally, intentions can be held with respect to a particular point in time (Tuesday, June 30, at 6:30 p.m.), a specified time period (August), or an unlimited time period (some time in the future). It should be clear that these factors are not unrelated. Certain objects never appear in a given location or at a given point in time; certain locations or situations are accessible only at specified time periods, etc.

Since neither time nor situation was specified, the intentions represent the most general levels of these two dimensions.

A factor analysis was performed on the matrix of correlations between behavioral intentions, and five dimensions of interpersonal intentions were identified. Some of the intentions with high loadings on these five dimensions can be inspected in Table 7.2.

Table 7.2 Dimensions of Interpersonal Intentions (Adapted from Triandis, 1964)

Intention	Factor loading	Intention	Factor loading
<i>Factor I: Formal Social Acceptance with Subordination versus Rejection with Superordination</i>			
Admire character of	.83	Praise suggestions of	.75
ObeY	.88	Work for	.57
Ask for opinion of	.88	Be commended by	.58
Believe	.85	Admire ideas of	.62
Elect to political office	.85	Accept as an intimate friend	.53
<i>Factor II: Marital Acceptance versus Rejection</i>			
Marry	.97	Fall in love with	.94
Physically love	.96	Kiss the hand of	.93
Go on a date with	.95	Love even after his death	.91
<i>Factor III: Friendship Acceptance versus Rejection</i>			
Eat with	.80	Be partners with in an athletic game	.76
Go fishing with	.73	Accept as an intimate friend	.68
<i>Factor IV: Hostile Acceptance versus Social Distance</i>			
Exclude from my neighborhood	.79	Work with	-.63
Accept as close kin by marriage	-.72	Prohibit from voting	.77
<i>Factor V: Interaction with Superiors-Subordinates</i>			
Treat as a subordinate	-.71	Be commanded by	.43
Command	-.55	Admire ideas of	.61

Triandis and his associates (e.g., Triandis *et al.*, 1968; Triandis, Tanaka, and Shanmugam, 1966) have subsequently performed a number of additional factor analyses of interpersonal intentions. Although there is some stability in factor structure, the number and nature of the emerging factors are found to depend in part on the target persons considered, on the intentions included in the analyses, and on the subjects who are making the ratings. A given intention may load on a certain factor in one analysis and on another factor in a different analysis. Further, as Table 7.2 shows, a given intention may load on more than one factor. Thus "admire ideas of" loads on Factors I and V, and "accept as an intimate friend" loads on Factors I and III. Generally speaking, however, five clusters

of intentions appear to emerge in most analyses; intentions tend to form the relatively stable patterns of interrelations shown in Table 7.3.

Table 7.3 Item Clusters Emerging in Factor Analyses of Intentions (Adapted from Fishbein, 1967b)

Cluster	Typical items
1. Admiration	Admire the character of Believe Admire ideas of Praise suggestions of
2. Subordination-Superordination	Be commanded by Elect to political office Treat as a subordinate Work for
3. Friendship	Accept as an intimate friend Treat as equal Eat with
4. Social distance	Invite to my club Exclude from my neighborhood Accept as a close kin by marriage
5. Marital	Go on a date with Fall in love with Marry

Depending largely on the types of stimulus persons that are rated, these different clusters tend to go together in different ways (i.e., they may load on the same or different dimensions in any given factor analysis). For example, in one study, admiration and friendship items may load on one factor, and social distance and subordination items may load on a second factor. In another study, admiration and subordination items may load on one factor, and friendship and social distance items may load on a second factor. Thus, although five relatively stable types of interpersonal intentions can be identified, these five general intentions are usually not independent. Relationships between the different types of behavioral intentions may vary from situation to situation, and one cannot assume that a given general intention will always be representative of the same factor.

A factor analysis, however, does serve to identify the dimensions underlying a given set of behavioral intentions with respect to a given set of target objects. This information can be used to obtain indices of general intentions in the context of a given study. For example, in Triandis's (1964) study it would have been possible to obtain a measure of intention to show "friendship acceptance" by selecting the four intentions with the highest loadings on this factor (i.e., Factor III in Table 7.2). The sum of the subject's responses to these four scales with

respect to a given stimulus person would represent the subject's intention to show friendship acceptance toward that stimulus person.¹ Similar indices could be obtained for each of the other factors, and thus, each subject's general intentions with respect to a given stimulus person would be available.

Just as it is possible to obtain indices of general intentions or clusters of intentions, it is possible to combine these general intentions to arrive at the most global intention, namely, the person's intention to exhibit favorableness or unfavorableness in his behavior with respect to an object. Note that such an index of global intention is based on a large set of heterogeneous intentions to perform various behaviors at different levels of specificity. By the same token, each specific intention in a given cluster (e.g., intention to eat with the stimulus person—see Table 7.3) may itself be viewed as based on a variety of even more specific intentions to perform that behavior in different situations and at different points in time. These considerations suggest that intentions may be viewed as ordered in terms of the five levels of specificity shown in Fig. 7.1.

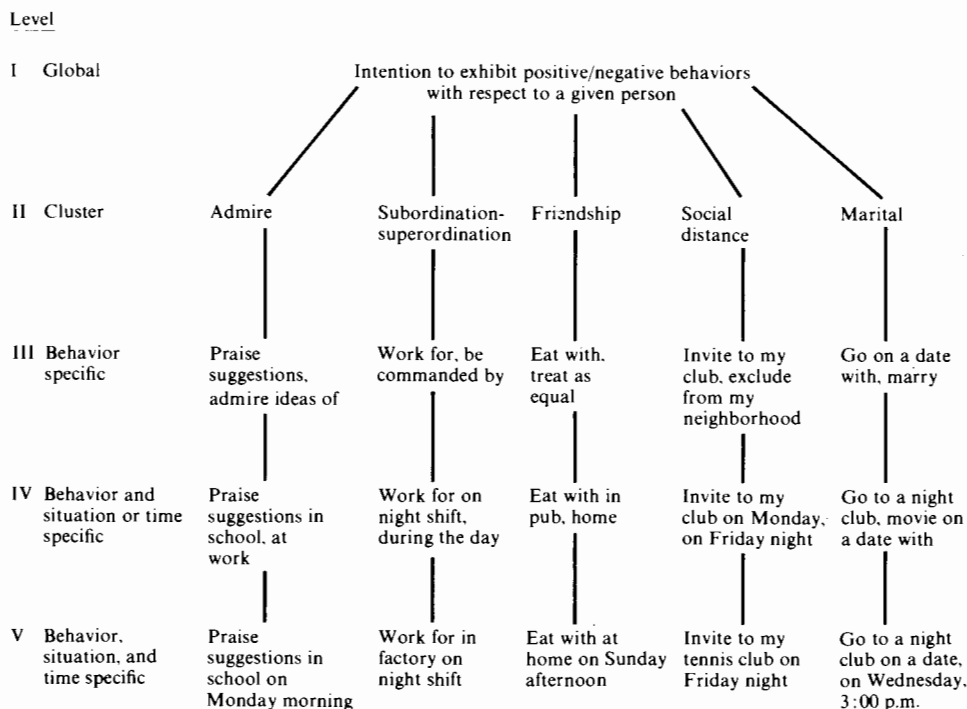


Fig. 7.1 Levels of intentional specificity.

1. A more sophisticated technique is to obtain factor scores that are based on all intentions and that weight each intention in terms of its loading on a given factor (for example, see Triandis, 1964).

Our discussion of the relation between attitude and intention suggested that a strong relation can be expected only when a global measure of intention (Level I) is used. We have noted that global intentions obtained by computing an index across all the intentions on Triandis's behavioral differential correlated highly with a measure of attitude. In the Fishbein and Ajzen (1974) study cited earlier, the index over 100 intentions also constituted a measure of global intention with respect to religiosity; this measure was found to correlate highly with various measures of attitude toward religiosity.

Global intentions can also be measured directly by asking a subject to indicate whether he intends to behave favorably or unfavorably with respect to some target.² For example, Ostrom (1969) measured global intentions with respect to the church on the following nine-point scale: *I act strongly supportive–strongly hostile* (toward the church). As might be expected, this global intention also correlated highly with various measures of attitude toward the church.

The second level in Fig. 7.1 represents the five basic clusters of intentions discussed earlier. These are still fairly general intentions to show admiration, to subordinate oneself, etc. Measures of these types of intentions can be obtained by asking a general question (e.g., "Do you intend to admire Person X?") or by computing an index across a set of intentions such as "praise suggestions," "admire ideas of," etc. The latter intentions are presented in Level III of Fig. 7.1. Greater specificity is introduced by considering situation or time (Level IV). The most specific intentions appear at Level V; these are intentions to perform a given behavior, with respect to the stimulus person, in a given situation, at a given point in time.

The intention at any given level can be estimated on the basis of a set of more specific intentions at the lower levels. For example, intention to "praise the suggestions of Person X in school" could be measured by considering intentions to praise his suggestions in school at various points in time. Clearly, as the intention becomes more and more specific, its relation to a general measure of attitude will tend to decrease. Even at Level II, the relation between attitude and intentions is somewhat unclear. It should be recalled that intentions at Level III (which define the clusters at Level II) tend to load on different factors in different analyses.

In Chapter 3 we noted that the first factor to emerge in a factor analysis is usually evaluative in nature. A given intention or cluster of intentions that loads highly on the first factor should therefore be related to attitude whereas intentions loading on the remaining factors may show little relation with attitude. Evidence for these notions is reported by Triandis and his associates (e.g., Triandis *et al.*, 1968; Triandis, Tanaka, and Shanmugam, 1966). Triandis *et al.* (1968) performed a factor analysis on 16 interpersonal intentions, and three factors emerged. Scores based on the first factor correlated .45 with a semantic differential mea-

2. It appears that an index based on a heterogeneous set of intentions is preferable to a single-item measure of global intention because the single-item measure may be affected by the exact wording used.

sure of attitude, and the correlations for the remaining two factors were .34 and .28, respectively. Generally speaking, at Level II the results of several studies seem to indicate that attitudes are most highly correlated with admiration and friendship intentions ($r \sim .55$), are moderately correlated with subordination and social distance intentions ($r \sim .35$), and are least correlated with marital intentions ($r \sim .15$).

In conclusion, there is little evidence for a systematic relation between attitudes and intentions. A measure based on a heterogeneous set of intentions, or a very general measure of intention to perform positive or negative behaviors with respect to some object, will be found to correlate with attitudes toward the object in question. As the measure of intention becomes more specific (in terms of the behavior, situation, or time), its relation to attitude will tend to decrease. Thus far we have assumed that attitudes and intentions are measured with respect to the same target object. Clearly, when different targets are involved, the attitude-intention relation will tend to be low, irrespective of the intention's specificity. For example, attitude toward blacks (a class of people) would not necessarily be expected to correlate highly even with a global intention to perform positive or negative behaviors with respect to Shirley Chisholm (a specific black woman, candidate for the Democratic Party's nomination for President of the United States in 1972) or Muhammed Ali. In other words, when attitudes and intentions are measured at different levels of target specificity, a high correlation cannot be expected.

DETERMINANTS OF INTENTIONS

From a practical point of view, intentions at Levels III, IV, and V are of most interest to an investigator. That is, the investigator usually attempts to understand and predict a person's intention to perform some particular behavior. The discussion above indicates that a measure of the person's attitude toward the target of the behavior will not allow accurate prediction. We must therefore turn to an examination of the determinants of such intentions.

Dulany's Theory of Propositional Control

One approach to this problem has been suggested by Dulany (1961, 1968). Investigating the role of awareness in studies of verbal conditioning, Dulany argued that subjects' responses in these studies are under volitional control; barring physical impediments, a person should do what he intends or tries to do. In a typical verbal conditioning experiment, subjects are reinforced for eliciting a certain class of verbal response (e.g., plural nouns). An increase in the frequency with which these responses are elicited is taken as evidence for conditioning. According to Dulany (1961) subjects form "self-instructional sets (or 'intentions') and . . . these in turn lead to selection of the corresponding response class" (p. 252). Consequently, Dulany turned his attention to the determinants of behavioral intentions.

In previous chapters we have encountered many of the elements contained in Dulany's theory, which deals with the determinants of behavioral intentions. The theory can be described most easily in the context of a verbal operant conditioning experiment. In such an experiment, certain responses on the part of the subject are positively or negatively reinforced by the experimenter. According to Dulany, the subject forms a *hypothesis of the distribution of reinforcement (RHd)*; i.e., he forms the hypothesis that the reinforcement follows a particular response or class of responses. This hypothesis about the contingencies between a subject's own responses and the reinforcement has previously been termed "contingency awareness." The effect of *RHd* on intentions depends on the subject's evaluation of the reinforcement. A positively evaluated reinforcer should increase the subject's intention to elicit the reinforced response, and a negatively evaluated reinforcer should decrease this intention.

In addition to being positively or negatively evaluated, the reinforcing event may also be perceived to signify that the reinforced response was "correct" or "incorrect." Dulany thus distinguishes between the *subjective value of a reinforcer (RSv)* and the subject's *hypothesis of the significance of a reinforcer (RHs)*. In conjunction with *RHd*, the hypothesis of the distribution of reinforcement, *RHs* allows the subject to form a *behavioral hypothesis (BH)*. For example, if the subject believes that Response *R* is followed by a reinforcer, and if he believes the reinforcer to signify that he has made a correct response, then he should form the behavioral hypothesis that he is supposed to elicit Response *R*. On the other hand, if he believes the reinforcer to signify an incorrect response, he should form the behavioral hypothesis that he is not supposed to elicit Response *R*. This hypothesis concerning the experimenter's behavioral expectations has previously been referred to as "demand awareness." The effect of *BH* on the subject's behavioral intention depends on his *motivation to comply (MC)* with the perceived expectations. A subject may believe that the experimenter wants him to elicit Response *R*, but he may or may not want to comply with the perceived expectation of the experimenter.

Letting *R* stand for the reinforced response and *BI* for the subject's behavioral intention to elicit that response, the central equation of Dulany's theory of propositional control can be expressed as follows:

$$R \sim BI = [(RHd) (RSv)]w_1 + [(BH) (MC)]w_2. \quad (7.2)$$

In Eq. 7.2, *RHd* is the hypothesis of the distribution of reinforcement; *RSv* is the subjective value of the reinforcer; *BH* is the behavioral hypothesis; *MC* is the motivation to comply; and w_1 and w_2 are weights indicating the relative importance of the two components in determining behavioral intentions. Further, *BH* is defined as the product of *RHd* and *RHs*; i.e., $BH = (RHd) (RHs)$, where *RHs* is the hypothesis of the significance of the reinforcer.

Looking at Eq. 7.2 we can see that a subject's performance of the reinforced response is closely related to his intention to perform that response. The intention's level of specificity is determined by the response in question; that is, the intention corresponds directly to the behavior that is to be predicted. In the con-

text of a verbal conditioning experiment, the subject's intention to elicit plural nouns might be measured.³ The central determinant of this intention is *RHd*, the hypothesis of the distribution of reinforcement. As was true with intentions, *RHd* corresponds directly to the response that is to be predicted; its level of specificity is thus again determined by the response in question. In our example, *RHd* would be the subject's belief that elicitation of plural nouns produces (+1) or does not produce (-1) the reinforcer. The subject's positive (+1) or negative (-1) evaluation of the reinforcer (*RSv*) is multiplied with *RHd*, resulting in the first component of the theory [$(RHd)(RSv)$]. For example, if a subject did not believe that plural nouns produced the reinforcer (-1), and if he positively evaluated the reinforcer (+1), his score for the first component would be -1; that is, he should intend not to elicit plural nouns. However, if he negatively evaluated the reinforcer (-1), his score for the first component would be +1, and he should intend to elicit plural nouns.

In a similar fashion, *RHd* is multiplied by *RHs*, the subject's hypothesis that the reinforcer signifies he was correct (+1) or incorrect (-1), resulting in the behavioral hypothesis (*BH*). The central term *RHd* thus enters both components of the theory. Returning to our example, *BH* is the subject's hypothesis that he is supposed to (+1) or is not supposed to (-1) elicit plural nouns. Multiplying this behavioral hypothesis by his motivation to comply (+1) or not to comply (-1) with his perception of what he is supposed to do produces the theory's second component [$(BH)(MC)$]. If a subject formed the hypothesis that he is supposed to elicit plural nouns (+1), and if he were motivated to (+1), his score for the second component would be +1 and he should intend to elicit plural nouns.

Thus we can see that two components serve as the basic determinants of intentions in Dulany's theory. The first component is similar to an expectancy-value formulation in that it refers to the subject's expectation that a given response (e.g., elicitation of plural nouns) will lead to a certain event (e.g., the experimenter's saying "good"), and the subject's evaluation of the event. The second component essentially represents perceived "demands" and motivation to comply with these demands. Each of the two components is assumed to contribute to the determination of intentions, but their relative importance may vary from situation to situation. Dulany (1961, 1964, 1968) and his associates (Dulany and O'Connell, 1963; Dulany, Schwartz, and Walker, 1965; Schwartz, 1966) have used multiple regression analysis to estimate these weights and to predict behavioral intentions from the two components. They have reported considerable evidence supporting the theory in the context of verbal-conditioning experiments. The multiple correlation between behavioral intention and the two components of the theory has been approximately .85. Of greater relevance to the attitude area, however, is the work

3. Dulany has developed a fairly complex measurement procedure for indirectly assessing *BI*, *RHd*, *RHs*, and *BH* and for directly assessing *RSv* and *MC*. Interested readers should see Dulany (1968, Appendix).

of Fishbein (1967b) and his associates (see Ajzen and Fishbein, 1973), who have extended Dulany's theorizing to an analysis of social behavior.

Fishbein's Model for the Prediction of Intentions

Realizing that the first component of Dulany's theory had a certain resemblance to an expectancy-value formulation, and that the second component could be viewed as involving the concept of social norms, Fishbein (1967b) proposed an alternative formulation of the theory. In the modified version, the theory's constructs have been reinterpreted and relabeled in an attempt to reveal their relations to more familiar social psychological concepts. As in the original formulation, the modified version of the theory deals with the prediction of a specific behavioral act. In a given situation, a person is assumed to hold or to form a specific behavioral intention which influences his subsequent overt behavior. The intention in the present theory refers to performance of a given action in a given situation; it is the intention to perform the particular overt response that is to be predicted.

According to the theory, there are two major factors that determine behavioral intentions: a personal or "attitudinal" factor and a social or "normative" factor. These two components in the theory are given empirical weights. Symbolically, the central equation of the theory can be presented as follows:

$$B \sim I = (A_B)w_1 + (SN)w_2. \quad (7.3)$$

In Eq. 7.3, B is the behavior; I is the intention to perform behavior B ; A_B is the attitude toward performing behavior B ; SN is the subjective norm; and w_1 and w_2 are empirically determined weights.

Behavioral intentions are a function of the weighted sum of two variables. The first, A_B , is the actor's attitude toward performing the behavior in question under a given set of circumstances. As we saw in Chapter 6, a person's attitude toward a specific behavior is proposed to be a function of the perceived consequences of performing that behavior and of the person's evaluation of those consequences. Thus

$$A_B = \sum_{i=1}^n b_i e_i, \quad (7.4)$$

where b is the belief that performing behavior B leads to consequence or outcome i ; e is the person's evaluation of outcome i ; and n is the number of beliefs the person holds about performing behavior B .⁴

4. All of a person's salient beliefs about performing the behavior in question determine his attitude toward the behavior. The terms "consequences" and "outcomes" in this context are generic terms referring to any belief about the behavior, including its perceived consequences, effort to perform the behavior, cost, and other attributes.

The parallel between A_B and the first component in Dulany's theory is apparent. Whereas Dulany's first component dealt with the subject's belief that a given behavior led to some specified reinforcing event, Fishbein has generalized this notion to all of the subject's beliefs about performing the act. Consistent with the expectancy-value theory of attitudes, this generalization suggested that the first component of Dulany's theory could be viewed as an attitude. In contrast to a traditional attitudinal approach, however, the attitude in question is the person's attitude toward performing a given behavior rather than his attitude toward the object or target of the behavior.

The second or normative component of the theory, SN , deals with the influence of the social environment on behavior. The subjective norm is the person's perception that most people who are important to him think he should or should not perform the behavior in question. According to the theory, the general subjective norm is determined by the perceived expectations of specific referent individuals or groups, and by the person's motivation to comply with those expectations. This formulation is presented symbolically in Eq. 7.5,

$$SN = \sum_{i=1}^n b_i m_i, \quad (7.5)$$

where b_i is the normative belief (i.e., the person's belief that reference group or individual i thinks he should or should not perform behavior B); m_i is the motivation to comply with referent i ; and n is the number of relevant referents. Of course, the potential reference groups or individuals whose expectations are perceived to be relevant will vary with the behavioral situation. In some instances the expectations of a person's family or friends may be most relevant, but in others it may be the expectations of his supervisors or the society at large which are most influential. Frequently, the expectations of more than one reference group will have to be considered. Then, of course, it is also necessary to measure the individual's motivation to comply with each of the relevant reference groups. According to Eq. 7.5, the $b \times m$ products are computed for each relevant reference group and summed. This sum is viewed as equivalent to a "generalized normative belief," i.e., the subjective norm (SN).

The parallel between SN and Dulany's second component is again apparent. In both cases, this component refers to perceived pressures to perform a given behavior and the subject's motivation to comply with those pressures. Although Dulany did not specify any particular referent for his second component, Fishbein interpreted this component in Dulany's theory as representing perceived expectations of the experimenter and the subject's motivation to comply with those expectations. Again, he generalized this notion by defining an overall subjective norm which includes all relevant reference groups and individuals.

The two major determinants, then, of behavioral intentions are the attitude toward the behavior and the subjective norm. As indicated in Eq. 7.3, the attitudinal and the normative components are given empirical weights in the prediction equation, proportional to their relative importance in the prediction of

behavioral intentions. These empirical weights (w_1 and w_2) are expected to vary with the kind of behavior that is being predicted, with the conditions under which the behavior is to be performed, and with the person who is to perform the behavior. For some behaviors, normative considerations (expectations of friends, family, etc.) may be more important in determining behavioral intentions than are attitudinal considerations (the expected outcomes of the act). For other behaviors, the reverse may be true. In a similar fashion we may expect that the relative importance of the two components will be influenced by situational variables, such as the behavior's observability, and by personal characteristics and preferences.

Ideally, the weights for the attitudinal and normative components would be available for each individual with respect to each behavior in a given situation. Since adequate estimates of this kind are not presently available, the practice has been to use multiple regression techniques, and standardized regression coefficients have served as estimates of the weights for the theory's components. The present version of the theory, then, is a multiple regression equation where there are two predictors, A_B and SN , and the criterion is I , the behavioral intention under consideration.

It is worth noting that the theory can deal with behavioral intentions at any level of specificity. The criterion might be a general intention to cooperate or to be gregarious, or it might be a very specific intention to, say, have a drink with Bill in Henry's Pub at 5 p.m. this afternoon. Once the intentional criterion has been selected, however, it is important to make sure that measures of the attitudinal and normative components are calibrated at the same level of specificity. In the case of the specific intention, for example, the attitude toward "having a drink with Bill in Henry's Pub at 5 p.m. this afternoon" would have to be measured, and the appropriate subjective norm would be the subject's belief that most people who are important to him think "I should (or should not) have a drink with Bill in Henry's Pub at 5 p.m. this afternoon." With respect to the global intention to be cooperative, the subject's attitude and subjective norm with respect to "being cooperative" would have to be measured. Clearly, the ability of the model to predict behavioral intentions depends in large part on the degree of correspondence between the levels of specificity associated with the intention on the one hand and the two components of the model on the other.

The formation of the theory's attitudinal and normative components has to some extent been discussed in previous chapters. The nature of attitudes and the factors influencing attitude formation were reviewed in Chapter 6, where we also showed that attitude toward a behavior is determined by the person's salient beliefs about the behavior's consequences and his evaluation of those consequences. Although we have not encountered subjective norms or *normative* beliefs before, we discussed in Chapter 5 the formation of beliefs in general. It may be argued that the processes underlying belief formation discussed in that chapter are also relevant for the formation of normative beliefs. This argument implies that normative beliefs can be formed in two ways. First, a given referent

or some other individual may tell the person what the referent thinks he should do, and the person may or may not accept this information. Second, the person may observe some event or receive some information that allows him to make an inference about a given referent's expectations. Very little research, however, has dealt directly with the formation of normative beliefs. Moreover, our discussion thus far has not touched on the nature of motivation to comply or on the factors that influence this variable. It therefore seems appropriate to consider the normative component in greater detail.

Nature of the Normative Component

One important question concerns the necessity for introducing a normative component in addition to attitude toward the behavior. It can be argued that normative beliefs may be considered a proper part of A_B as conceptualized in Eq. 7.4. That is, some of the consequences of performing a given act are that the act may please or displease relevant reference individuals or groups, and that it may lead to reward or punishment from a given referent. Depending on the person's evaluation of these consequences, his attitude toward the behavior should become favorable or unfavorable. The present theory is actually not incompatible with this view. In fact, beliefs of this type may be part of the person's salient beliefs about performing the behavior and may thus influence the first component in the model, i.e., the person's attitude toward performing the behavior.

Although it would be possible to reinterpret the normative component in terms of an expectancy-value formulation, the theory suggests that it is useful to maintain the distinction between beliefs about the consequences of performing a behavior and beliefs about expectations of relevant referents. Consider, for example, the normative belief that "my doctor thinks I should take medicine X ." Clearly, a person can hold this belief without necessarily holding beliefs about the behavior, such as "taking medicine X will please my doctor" or "taking medicine X will lead to a reward from my doctor." Further, a given belief about a referent's reactions may have different effects on the attitudinal and normative components. Consider the belief that "buying Sugar Puffs will please my child." This belief, together with other salient beliefs about buying Sugar Puffs, may influence the attitude toward the behavior. At the same time, it may also be one of the factors leading to the inferential normative belief that "my child thinks I should buy Sugar Puffs." As we have seen in previous chapters, different processes underlie the formation of the attitude toward the behavior and of the normative belief. It follows that a given factor may have different effects on the attitudinal and the normative components of the theory. If one maintains the distinction between these two components, it becomes possible to gain a better understanding of the ways in which behavioral intentions are formed.

Moreover, this distinction emphasizes the importance of two basic social psychological concepts that have traditionally been treated independently. Psychologists and sociologists interested in individual behavior have frequently made use

of the attitude concept whereas theorists dealing with groups and societies have often relied on the concept of social norm. By including an attitudinal and a normative component, the present theory emphasizes the importance of both concepts and provides a bridge between the two approaches to the study of human behavior.

We have seen above that normative beliefs may be formed as the result of an inference process. The argument was that if a person believes that a given referent would be pleased if he performed the behavior, the person may infer that the referent thinks he should perform the behavior. In Chapter 5 we discussed a number of different inference processes, and some of these processes may also be operative in the formation of normative beliefs. Some normative beliefs are perhaps formed as a result of syllogistic reasoning. For example, a person may believe that a given referent thinks he should cooperate (minor premise). He may further believe that behavior *X* is a form of cooperation (major premise) and may thus conclude that the referent thinks he should perform behavior *X*. The formation of other normative beliefs may involve an attribution process along the lines of Bayes's theorem. Consider a person who is given \$5 by referent *R* for performing behavior *X*. Depending on the diagnostic value of this item of information, the person may or may not infer that referent *R* thinks he should perform behavior *X*. The normative belief that "*R* thinks I should perform behavior *X*" will be formed only if the conditional probability of receiving \$5 from *R*, given that *R* thinks the person should perform behavior *X*, is perceived to be greater than the conditional probability of receiving \$5 from *R*, given that *R* thinks the person should not perform behavior *X*. A similar attribution process may result when the person observes referent *R* perform behavior *X*.

Finally, normative beliefs may perhaps also be inferred from the referent's perceived attitude toward performing a given behavior. If the referent is perceived to have a favorable attitude toward performing the behavior, or more specifically, toward the person's performing the behavior, the normative belief may be formed that the referent thinks the person should perform the behavior in question.⁵

So far we have considered beliefs about the normative expectations of specific referent groups or of a generalized other. However, it is possible to conceive of a different interpretation of Dulany's (1968) behavioral hypothesis (*BH*). Specifically, *BH* could be viewed as a *personal* normative belief, i.e., as the person's own belief about what he should or ought to do. Indeed, in his original formulation, Fishbein (1967b) included a component dealing with personal normative beliefs. However, empirical findings have repeatedly indicated that a subject's report of his personal normative belief serves mainly as an alternative measure of his behavioral intention. Inclusion of personal normative beliefs in the theory therefore tended to confound, rather than clarify, the problem of understanding

5. In terms of a Bayesian analysis, the referent's perceived attitude toward performing a behavior has high diagnostic value in terms of the corresponding normative belief.

the determinants of behavioral intentions. For this reason, personal normative beliefs have been deleted from the present version of the theory.⁶

Motivation to comply. Turning to the last, and perhaps least understood, term in the theory, we can at the present time make only some tentative suggestions concerning the nature and determinants of motivation to comply. One problem is that this concept can be interpreted in different ways. In Eq. 7.5, m_i was defined as the respondent's general motivation to comply with referent i , regardless of the referent's particular demands. Alternatively, m_i could refer to the person's motivation to comply with referent i concerning the particular behavior or behavioral domain under consideration. When the measure of motivation to comply is specific to the behavior in question, m plays a role similar to the weight w_2 , which is also behavior-specific. On both theoretical and empirical grounds it appears that motivation to comply is best conceived as the person's general tendency to accept the directives of a given reference group or individual.

As to the factors influencing motivation to comply, French and Raven's (1959) discussion of the bases of social power may be of relevance in this context. It stands to reason that a person's motivation to comply with a given referent would increase with that referent's power over the person. Thus motivation to comply may increase with the referent's power to reward or punish the person, with the person's liking for the referent, with the referent's perceived expertise, and with the extent to which it is legitimate for the referent to make demands of the person.

A person's motivation to comply with various reference groups may also be related to certain personality characteristics, such as his need for approval or affiliation, his self-esteem, or authoritarianism. However, previous work on personality variables of this kind in various areas of social psychology leads us to be rather pessimistic about the utility of this approach.

Perhaps of greater promise is an approach suggesting that motivation to comply can be interpreted as the person's *intention* to comply with the referent in question. The determinants of this intention are the same determinants discussed earlier with respect to any behavioral intention, and the following equation can be written to express these notions.

$$m \sim I_c = (A_c)w_1 + (SN_c)w_2. \quad (7.6)$$

6. Although there is a clear conceptual distinction between personal normative beliefs and behavioral intentions, the high relation between obtained measures of these variables suggests that it may be difficult to develop a satisfactory operationalization of personal normative beliefs. Recently, Schwartz and Tessler (1972) have used a measure of personal normative beliefs that emphasizes moral considerations. Although this measure was highly related to intention, it did not account for all the variance in the criterion.

In this equation, m is the motivation to comply with referent R ; I_c is the intention to comply with referent R ; A_c is the attitude toward complying with referent R ; and SN_c is the subjective norm concerning compliance with referent R .

Other Factors Influencing Intentions

According to Fishbein's theory, then, a person's intention to perform any behavior is determined by his attitude toward performing the behavior (A_B) and by his subjective norm (SN). The theory suggests that additional variables external to the model can influence intentions only indirectly by influencing either of the two components or their relative weights. A given variable will thus have an effect on intentions if it meets one or more of the following conditions. (1) It influences the attitudinal component, and that component carries a significant amount of weight in determining the intention. (2) It influences the normative component, and that component carries a significant amount of weight in determining the intention. (3) It influences the relative weights of the two components. Even though a given variable may affect one of the two components, it will not necessarily influence intention unless that component carries a significant weight in determining the intention.

For example, one variable external to the model that has received special attention is the subject's attitude toward the target object or target person. As we noted earlier, the usual assumption is that subjects will intend to perform positive behaviors with respect to persons and objects they like, and to perform negative behaviors with respect to persons and objects they dislike. Like any other variable, however, an individual's attitude toward some person or group of people (e.g., his attitude toward blacks) may be related neither to the attitudinal nor to the normative component, and it will then also be unrelated to his intentions with respect to the person or group. Furthermore, even when a traditional measure of attitude is correlated with one of the two components, it will still be unrelated to intention if that component carries little or no weight in the determination of the behavioral intentions in question.

There is no necessary relation between traditional measures of attitude toward an object and the model's predictors. For example, the perceived consequences of performing a certain behavior toward a liked person may, in some situations, differ from those of performing the same behavior toward a disliked person. In such a situation the attitude toward the person is expected to be related to A_B , the attitude toward the behavior, and hence to influence intention if A_B carries a significant weight in the prediction equation. In other situations a given behavior will be perceived to lead to the same consequences, irrespective of the actor's liking for the stimulus person. No influence of liking on A_B or on intention would be expected. Similarly, there are situations in which one is expected to behave differently toward a liked than toward a disliked person, whereas in others, subjective norms regarding behavior toward liked and disliked persons

are identical. In the former case, some relation between attitude and intention might be obtained because of the influence of liking on subjective norm. Such a relation is unlikely in the latter case.

The theory thus can provide an explanation for the lack of consistent relations between traditional measures of attitude and specific behavioral intentions. The considerations above indicate that traditional attitude measures (e.g., toward people, groups, institutions) will be related to intentions under some conditions but not under others. Like any other variable external to the theory, the effects of attitudes on intentions can be understood only in terms of their influence on the two components (and their weights), which, according to the theory, are the immediate antecedents of behavioral intentions. Let us now consider some of the research that has been conducted in an attempt to find empirical support for the theory.

Empirical Support

Over the last few years, Fishbein and his associates have conducted a number of investigations based on the intentional model described above (Fishbein, 1966; Ajzen and Fishbein, 1969, 1970, 1972; Fishbein *et al.*, 1970; Ajzen, 1971b; Hornik, 1970; DeVries and Ajzen, 1971; A. R. Carlson, 1968; McArdle, 1972; Darroch, 1971; Glassman, 1971; Jaccard and Davidson, 1972). A review of some of this research can be found in Ajzen and Fishbein (1973). These studies have attempted to predict various intentions, including intentions to cooperate or compete, to buy certain products, to sign up for an alcoholic treatment program, to perform various leisure-time activities, to use certain types of contraceptives, to cheat on an exam, and to engage in premarital sexual intercourse.⁷

Predicting behavioral intentions. In Chapter 6 we described how attitudes toward a behavior can be measured and gave Jaccard and Davidson's (1972) study of women's attitudes toward using birth control pills as an example. Subjects were asked to rate the concept "using birth control pills" on a set of evaluative semantic differential scales. This measure of attitude was found to be highly related to the subjects' beliefs about the consequences of using birth control pills and their evaluations of those consequences. These were the 15 beliefs that had been elicited most frequently in interviews with an independent sample of women. In the same interviews, the respondents were also asked questions designed to elicit referents relevant to the use of birth control pills. For example, they were asked where they would go for more information about birth control pills and whether there were any particular individuals or groups who would approve or disapprove if they used birth control pills. The 12 most frequently mentioned referents were included in the questionnaire used in the subsequent study; among them were

7. Most of these studies were conducted before the development of the notion of a general subjective norm. The investigators therefore assessed the normative component by measuring normative belief (and motivation to comply) with respect to one or more specific referents.

mother, father, husband/boyfriend, Zero Population Growth, women's magazines, and "the religion I was brought up in." Normative beliefs concerning each referent were assessed by a statement, such as:

My mother thinks

I should should not
use birth control pills.

Motivation to comply with each referent was also measured on a single seven-point scale, such as:

In general

I want to I want not to
do what my mother thinks I should do.

These two measures were scored from +3 (I should, I want to) to -3 (I should not, I want not to) and multiplied by each other. The resulting products for the 12 referents were summed to provide a measure of the normative component ($\Sigma b_i m_i$). Finally, subjects also indicated their intentions to use birth control pills on the following seven-point scale:

I intend to use birth control pills.

probable improbable

The investigators performed a multiple regression analysis and found a multiple correlation of .835 for the prediction of intention to use birth control pills from the attitudinal and normative components of the theory.

This high correlation is representative of the results obtained in most investigations. For example, two experiments (Ajzen and Fishbein, 1970; Ajzen, 1971b) have measured subjects' intentions to choose cooperative or competitive strategies in a two-person experimental game known as the Prisoner's Dilemma. In this game the two players make repeated choices between two alternatives (X and Y) which are assumed to serve the motives of cooperation and competition, respectively. The combined choices of the two players determine the payoff to each. A typical payoff matrix for a Prisoner's Dilemma game is as follows:

		Your partner	
		X	Y
You	X	+6, +6	-8, +8
	Y	+8, -8	-2, -2

The first entry in each cell of the matrix is the payoff to the subject, and the second is the payoff to his partner. Thus, if both players cooperate (i.e., both select X on a given trial), both gain 6 points; if both compete (i.e., both select Y), both lose 2 points; if one cooperates and the other competes, the person who cooperates loses 8 points, and the person who competes gains 8 points.

In both studies, measures were obtained of the subject's intention to choose X and Y , his attitude toward choosing X and Y , his belief that his partner thought

he should choose X and Y , and his motivation to comply with his partner. Three games with different payoff matrices were played in the two experiments. The multiple correlations for predicting intentions from the attitudinal and normative components of the theory were .888, .899, and .818 for the three Prisoner's Dilemma games.

In another study, McArdle (1972) assessed intentions of alcoholics to sign up for the alcoholic treatment unit (ATU) in a V.A. Hospital. She also obtained measures of her subjects' attitudes toward "signing up for the ATU," their normative beliefs that their wife/ex-wife, doctor, parents, minister/priest, and close friends thought they should or should not sign up for the ATU, and their motivation to comply with each of these five referents. An index of subjective norms was again obtained by summing over the five $b_i m_i$ products. The multiple correlation of A_B and $\Sigma b_i m_i$ on intentions was found to be .740.

The evidence thus strongly supports the present theory by showing that the two predictors, A_B and SN , offer high multiple correlations with behavioral intentions. The relevant results obtained in 13 studies are shown in Table 7.4, along with the intentions that were predicted. Note that the multiple correlations are generally very high; the average correlation over all studies is .746.

Table 7.4 Multiple Correlation Coefficients for the Prediction of Intentions to Perform Various Behaviors

Study	Intention	Multiple correlation
Fishbein (1966)	Engage in premarital sexual intercourse.	.849
Carlson (1968)	Perform 30 behaviors toward an African Negro.	.839 *
Ajzen and Fishbein (1969)	Perform 8 leisure-time activities.	.766 *
Fishbein <i>et al.</i> (1970)	Send communications to coworkers.	.704
	Follow the instructions of coworkers.	.608
Hornik (1970)	Maintain missiles in an experimental game.	.806
Ajzen and Fishbein (1970)	Choose alternative X or Y in 2 PD games.	.714
Ajzen (1971b)	Choose alternative X or Y in PD game.	.716 *
DeVries and Ajzen (1971)	Cheat in college. Copy from other students' test papers. Allow other students to copy from one's own test paper.	.869 *
		.818
		.566
Darroch (1971)	Sign 2 interracial photographic releases.	.647
Ajzen and Fishbein (1972)	Perform 4 behaviors involving risk.	.793 *
Jaccard and Davidson (1972)	Use birth control pills.	.836
McArdle (1972)	Sign up for alcoholic treatment unit.	.740
Glassman (1971)	Buy 8 products.	.665 *

* Average multiple correlation coefficients.

Relative weights of attitudinal and normative components. Perhaps of greater importance than the high multiple correlations are the relative weights of the two components in the prediction of behavioral intentions. According to the theory, these weights should vary with the behavior, with the situation, and with individual differences between actors. Over all studies conducted and across conditions within them, there is a slight tendency for the attitudinal component to take on a somewhat greater weight than does the normative component. However, such a comparison is theoretically meaningless. Different behaviors, different situations, and different individuals have to be compared.

The relative weights of the two components are estimated by standardized regression coefficients obtained in the multiple regression analyses. These coefficients represent empirical estimates of optimal weights for a given group of subjects and thus provide "objective" indices of the relative importance of the two components. As we noted in Chapter 5, however, such regression weights need not correspond to the subject's own judgment of the relative importance of the two components.

Table 7.5 Correlations, Regression Coefficients, and Multiple Correlations of A_B and $\Sigma b_i m_i$ on Intentions to Engage in Premarital Sexual Intercourse (From Fishbein, 1966)

Subjects	Correlation coefficients		Regression coefficients		Multiple correlation
	A_B	$\Sigma b_i m_i$	w_1	w_2	
Males	.518 *	.843 †	-.148	.947 †	.850 †
Females	.918 †	.759 †	.757 †	.232 *	.935 †

* $p < .05$

† $p < .01$

Fishbein (1966) found evidence for individual differences in regression weights in a study concerned with intentions to engage in premarital sexual intercourse (PSI) among undergraduates. At the beginning of the semester, subjects rated their intentions to "engage in PSI this semester" on a seven-point bipolar scale. In addition, measures were obtained of the subjects' attitudes toward "engaging in PSI this semester" and of their normative beliefs that their families and their closest friends thought they should engage in PSI this semester. The results of the study are presented in Table 7.5. Both components correlated significantly with intentions, and the multiple correlations were also high and significant for both male and female subjects. The relative weights of the two components differed, however, for the two sexes. For female subjects, the standardized regression coefficients in the prediction of intentions were .757 ($p < .01$) for the attitudinal component and .232 ($p < .05$) for the normative component. The strength of the

regression weights was reversed for the male sample: The attitudinal component had a regression weight of $-.148$ (nonsignificant), and the regression coefficient of the normative component was $.947$ ($p < .01$). Thus it appears that attitudinal considerations of engaging in premarital sexual behavior were more important than normative considerations for female students. Subjective norms, however, were the primary determinants of behavioral intentions for males.

Carlson (1968) observed differences in regression weights as a function of the kind of behavior under consideration. He attempted to predict responses to a 30-item form of Triandis's (1964) behavioral differential. Using Triandis's standard procedure, Carlson first asked his female subjects to indicate their intentions to perform 30 different behaviors with respect to a "21-year-old, male, African Negro student." In addition, the subjects supplied measures of their attitudes toward performing each of these behaviors with respect to the target person, their beliefs that they should or should not engage in each of the behaviors with respect to the target person,⁸ and their motivation to do what they thought they should do.

As in the work by Triandis, a factor analysis of the 30 behavioral intentions yielded five major factors that were labeled "formal social acceptance, informal social acceptance, marital acceptance, cooperation, and subordination-superordination." The loadings of the 30 intentions on these factors were found to correlate significantly with the regression coefficients of the attitudinal and normative components for each of the behaviors. For example, the regression coefficients of the normative component correlated $.60$ with the loadings of the behavioral intentions on the marital acceptance factor. That is, the more a given behavior involved marital acceptance, the greater was the importance of normative considerations. Similarly, there was a positive correlation ($r = .54$) between the regression weights of the attitudinal component and the formal social acceptance factor. The more a behavior involved formal social acceptance, the greater became the importance of attitudinal considerations.

Glassman (1971) obtained evidence that the weights of the attitudinal and normative components varied with the target of the intention under consideration. Women customers at a supermarket were asked to indicate their intentions to buy two different named brands in each of four product classes (coffee, detergents, potato chips, and gasoline). In addition, measures were obtained of their attitudes toward buying each of the eight brands, their normative beliefs that each of five referents (mother, friends, husband, consumer reports, advertising) thought they should buy each of the eight brands, and their motivation to comply with each of the five referents. Although attitudinal considerations were the more important determinants of all eight buying intentions, normative considerations significantly influenced intentions to buy two kinds of products, coffee and gasoline. With respect to these two targets, the perceived expectations of the women's husbands were of particular importance.

8. Personal, rather than social, normative beliefs were used in this study.

Situational characteristics can also be shown to influence the relative weights of the attitudinal and normative components. For example, these weights may take on different values in cooperative and competitive situations. It stands to reason that perceived expectations of others with whom a person is trying to cooperate will be more important than expectations of others with whom he competes. Conversely, considerations of an act's consequences (i.e., attitudinal considerations) should carry a greater weight under competition than under cooperation. These expectations were borne out in the studies by Ajzen and Fishbein (1970) and Ajzen (1971b) using the Prisoner's Dilemma game. In the first study, two subjects played two games with different payoff matrices under one of three motivational orientations: cooperation, individualism, or competition. In the cooperative condition the subjects were instructed to consider themselves partners; in the competitive condition they were told to do better than the other person; players in the individualistic condition were told to have no interest whatever in the fate of the other person. The regression coefficients of the attitudinal and normative components on behavioral intentions showed the expected patterns. Under cooperation, the regression coefficients of the normative component were .707 ($p < .01$) and .573 ($p < .01$) in the two games played. The corresponding weights of the attitudinal component were .229 and .239 (both nonsignificant). In the competitive conditions, the regression coefficients were .327 ($p < .01$) and .298 ($p < .01$) for the normative component and .691 ($p < .01$) and .669 ($p < .01$) for the attitudinal component. Clearly, subjective norms were more important under cooperation, and attitude toward the behavior was more important under competition. There were no appreciable differences between the weights of the components in the individualistic conditions. The results for one of the two Prisoner's Dilemma games played in this study are summarized in Table 7.6.

Table 7.6 Correlations, Regression Coefficients, and Multiple Correlations of A_B and $b_i m_i$ on Intentions to Choose the Cooperative Alternative in a Prisoner's Dilemma Game (Adapted from Ajzen and Fishbein, 1970)

Condition	Correlation Coefficients		Regression Coefficients		Multiple correlation
	A_B	$b_i m_i$ ‡	w_1	w_2	
Cooperation	.370 *	.752 †	.229	.707 †	.785 †
Individualism	.710 †	.780 †	.353 *	.552 †	.852 †
Competition	.883 †	.733 †	.691 †	.327 †	.922 †

* $p < .05$

† $p < .01$

‡ Only the perceived expectations of the other player were considered.

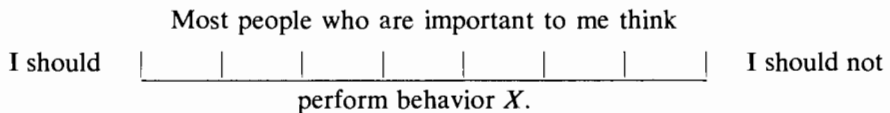
These findings were corroborated in an experiment where a different Prisoner's Dilemma game was played either under cooperative or competitive instructions (Ajzen, 1971b). The regression coefficient of the normative component was

.768 ($p < .01$) under cooperation but only .225 (not significant) under competition. The attitudinal component carried a significant ($p < .01$) regression weight under competition ($w_1 = .541$) but not under cooperation ($w_2 = .112$).

In conclusion, there is considerable evidence that behavioral intentions are predictable from the theory's attitudinal and normative components. Furthermore, the relative importance of these two components in the prediction of intentions varies with the type of behavior under consideration, with the situation in which the behavior is to be performed, with the target, and with individual differences between actors.

Determinants of the attitudinal and normative components. The determinants of beliefs and attitudes were considered in previous chapters. We have reviewed considerable evidence supporting the notion that attitudes are a function of beliefs about the attitude object's attributes multiplied by evaluations of those attributes. In Chapter 6 we showed that this expectancy-value formulation also held with respect to attitude toward performing a behavior. Thus A_B , the attitudinal component, is determined by beliefs about the consequences of performing the behavior in question and the person's evaluation of those consequences. Many of the studies discussed above have provided additional evidence for this notion (e.g., Fishbein, 1966; Ajzen and Fishbein, 1970, 1972; McArdle, 1972; Glassman and Fishbein, 1973; Jaccard and Davidson, 1972).

According to our theory, subjective norms are determined by normative beliefs and motivation to comply (that is, $SN = \sum b_i m_i$). Empirical evidence for the relation between SN and $\sum b_i m_i$ has been reported by King and Jaccard, (1973) and Glassman and Birchmore (1974). These studies obtained measures of subjective norms on the following scale.



This measure was correlated with $\sum b_i m_i$; correlations ranging from .625 to .910 were obtained.

Most studies conducted to date have not used measures of subjective norms (SN) but have measured normative belief and motivation to comply with one or more referents. Although the research on belief formation discussed in Chapter 5 is relevant for an understanding of the factors that influence the formation of normative beliefs, relatively little research has dealt directly with the determinants of such beliefs. As we noted earlier, normative beliefs are likely to be the product of certain inference processes. One possibility mentioned was that normative beliefs are inferred in part on the basis of beliefs about the referent's attitude toward the behavior in question.

Ajzen and Fishbein (1972) tested this notion by using four hypothetical decision situations involving a certain amount of risk. One situation, for example, was described as follows:

Over the last few years you have done some part-time work and you have saved the amount of \$1,000. You would now like to invest this money profitably. It has come to your attention that a plot of real estate in a developing residential area is available for the amount of money in your possession. If a planned building project proves successful, the plot of land might double its present value. However, if the project fails, you would lose your entire investment.

The remaining three situations involved undergoing a delicate medical operation, renting your house to a Negro family, and undergoing a kidney transplant for your brother. An attempt was made to manipulate normative beliefs by telling the subject that a given referent believed there was either a high (.70) or a low (.30) probability that the risky behavior would lead to success. That is, the referents (close family and friends) were said to have low or high confidence in the risky behavior's chances of success. A direct measure of the referent's perceived attitude toward the behavior was obtained using four evaluative semantic differential scales. In addition, a measure of normative beliefs was taken. Over the four hypothetical situations, the average correlation between normative beliefs and perceived attitude of the referent was .635. Thus there is some empirical evidence that normative beliefs are related to the subject's perception of the referent's attitude toward the behavior in question. However, the correlations between the referents' perceived attitudes and normative beliefs varied across the four situations (ranging from .354 to .773). Such variations should not be surprising since the magnitude of this correlation should be related to the perceived attitudes' diagnostic value, which may differ from situation to situation.

Also in support of the notion that normative beliefs may be inferred from the referent's perceived attitude, the experimental manipulation of the referent's estimate that the risky behavior would lead to success (.70 versus .30) had a significant influence on both variables. When the subject was told that the referent's estimate of success was high, he inferred that the referent had a favorable attitude toward the risky behavior and that the referent thought he should engage in the risky behavior. The measures of normative beliefs and perceived attitudes were significantly lower when the referent was said to have a low estimate of success. Clearly, then, the perceived attitude of a relevant referent exerts a significant influence on normative beliefs.

It has been argued that motivation to comply with the referent's expectations may be related, among other things, to the referent's power over the actor. Limited support comes from Ajzen's (1971b) study using the Prisoner's Dilemma game. In this study, a measure was obtained of the subject's desire to please his partner. It is possible to argue that this measure is an indication of the other person's referent power (i.e., the subject's attitude toward the referent; cf. French and Raven, 1959). Consistent with expectations, the correlation of this measure with motivation to comply was found to be .661 ($p < .01$).

Effects of "external" variables. According to the theory, any variable other than A_B or SN can influence behavioral intentions only indirectly. Thus, "external" factors,

such as demographic or personality characteristics of the actor, the nature of the particular behavior under investigation, or situational variables can affect intentions only if they influence the attitudinal or normative components, or their relative weights.

Many of the studies previously discussed have provided support for this prediction. The conclusion emerging from them is that any variable found to be related to behavioral intentions is also related to at least one of the two predictors in the theory. External variables unrelated to intentions are also unrelated to either the attitudinal or normative component. Moreover, whenever an external variable is related to intentions, this relation is considerably attenuated when A_B and SN are statistically held constant. For example, Ajzen and Fishbein (1970) studied the effects of the players' authoritarianism and sex on strategy choices in the Prisoner's Dilemma. Further, two games differing in their payoff matrices were played under one of three motivational orientations: cooperation, competition, and individualism. The results indicated that intentions were affected significantly by the payoff matrix and by motivational orientation. There were no significant relations between intentions and either sex or authoritarianism. Examination of findings with respect to normative beliefs and attitude toward the act showed the same pattern: significant effects of payoff matrix and motivational orientation; no significant effects of sex and authoritarianism on either of the theory's two predictors. A statistical technique known as analysis of covariance (in which attitude toward the behavior and normative beliefs were held constant) reduced the effect of the payoff matrix on intentions to nonsignificance. The effect of motivational orientation, though significant at the .05 level, was greatly attenuated.

These results demonstrate the intervening role played by the theory's two components. The effects of external variables on behavioral intentions seem to have been mediated by attitudinal and normative considerations. Similar findings emerged in an experiment by Ajzen and Fishbein (1974), in which three-person groups were to level a triangle board. This task was facilitated by spirit levels mounted on top of the triangle board in front of each group member. Two experimental conditions were created by varying the alignment of the spirit levels and thus affecting the information available to the group members. These variations had strong effects on behavioral intentions. In one condition, subjects intended to send an approximately equal number of communications to the other two group members, and each subject intended to comply with approximately the same proportion of the instructions he received from each group member. In the second condition, however, intentions were to send considerably more communications to one group member and to comply more with the other. Exactly the same pattern of results was observed with respect to the attitudinal and normative components. Attitudes toward the behavior and subjective norm were affected by the experimental manipulation in the same way as were intentions, indicating again that the theory's two components tend to mediate the effects of external variables, in this case a situational variable.

We have noted that a person's attitude toward some object (A_o) can be treated like any other variable external to the theory. That is, A_o is expected to predict intentions only to the extent that it is related to at least one of the theory's two components, and even then only if that component carries a significant weight in the regression equation.

Evidence for this claim has been obtained in several investigations. In the two studies employing the Prisoner's Dilemma game (Ajzen and Fishbein, 1970; Ajzen, 1971b), each subject was asked to evaluate his partner on four evaluative semantic differential scales. As expected, the correlations of this general measure of attitude toward the other player with intentions to cooperate with him (i.e., choose alternative X) were low and not always significant. In the first study, these correlations were .237 ($p < .05$) and .091 (not significant) in the two Prisoner's Dilemma games played; in the second study, the correlation was .242 ($p < .05$).

The role of the attitudinal and normative components in mediating these effects was explored by computing partial correlations between A_o and intentions, holding A_B and SN constant. Table 7.7 shows that whenever attitude toward the other player was correlated with intentions, it also correlated with the attitudinal and normative components of the theory. When these two components were held constant, the partial correlations between A_o and intentions were reduced to non-significance.

Table 7.7 Effects of Attitudes toward an Object (A_o) on Intentions (Adapted from Ajzen and Fishbein, 1973)

Study	Product-moment correlations			Partial correlations	
	$A_o - I$	$A_o - A_B$	$A_o - b_i m_i$ ‡	$A_o - I$ §	
Ajzen and Fishbein (1970)	Game 1	.237 *	.354 †	.262 *	-.126
	Game 2	.091	.239 *	.015	-.197
Ajzen (1971b)		.242 *	.257 *	.241 *	.092

* $p < .05$

† $p < .01$

‡ Only one referent was considered

§ A_B and $b_i m_i$ are held constant

Similar results were found in the triangle board study (Ajzen and Fishbein, 1974), in which the subject's attitudes toward his two coworkers were correlated with his intentions to send communications to them and to follow instructions from them. Although A_o was unrelated to intentions to communicate ($r = -.003$), there was a low but significant correlation ($r = .279$) with intentions to follow instructions. This correlation was again reduced to nonsignificance when the attitudinal and normative components were held constant. The relation between A_o and intentions to follow instructions seems to have been mediated by the relatively

high correlation ($r = .418$, $p < .01$) between this general attitude toward the coworkers and the attitude toward following their instructions (A_B).

Although holding A_B and SN constant does not always completely eliminate the correlation between A_o and intentions (e.g., Darroch, 1971; Hornik, 1970), this correlation is always greatly attenuated. For example, Hornik measured subjects' attitudes toward their opponents in a two-person war game in which subjects could cooperate or compete by reducing or increasing the number of missiles they held. Hornik created three experimental conditions by varying the opponent's cooperative or competitive strategy. Correlations between attitudes toward the opponent and intentions to maintain a given number of missiles were found to be high and significant in two of the three conditions ($r = .771$, $.763$, and $-.085$, respectively). In the first two conditions high correlations were also found between A_o and the attitudinal and normative components of the theory. Holding these two components constant reduced the correlation between A_o and I to non-significance in the first condition ($r = .294$) and greatly attenuated it in the second condition ($r = .444$; $p < .05$).

Generally speaking, then, the results of several investigations indicate that the inconsistent attitude-intention relationship can largely be attributed to variations in the degree to which the general attitude measure (A_o) is related to the two determinants of intentions (A_B and SN).

VARIATIONS IN ELEMENTS OF INTENTIONS

The discussion above provides empirical evidence in support of Fishbein's model for the prediction of intentions. Most other research in this area has studied the effects of various factors on intentions by manipulating one or more of the four elements constituting the intention: behavior, target, situation, and time. Variations in any of these elements change the nature of the intention and are thus likely to influence responses. Other things being constant, a person may intend to perform one behavior but not another. Of greater interest, characteristics of the target may influence intentions. For example, a person may be willing to marry someone of his own but not of a different religion, of his own but not of a different race, etc. Similarly, variations in the situations are likely to influence intentions. A person may intend to drink iced tea on a hot day but not on a cold day, or to drink wine with dinner but not with breakfast. Finally, time may be an important determinant of intentions. Most people intend to go to sleep at night and not in the morning, to go to church on Sunday but not during the week, etc. Much of the research on factors influencing intentions has dealt with characteristics of the target; less attention has been paid to situational and behavioral variations; and the time dimension has usually not been considered. In addition, investigators have examined effects of individual differences among subjects (such as their sex, religiosity, and prejudice), and some studies have been concerned with the possible influence of social norms on intentions.

Effects of Target and Behavior

Although a distinction has been made between cognition, affect, and conation, the "conative component of attitude" had been submitted to little empirical investigation until the pioneering work of Triandis and his associates. We noted early in this chapter that Triandis (1964) measured a large set of intentions with respect to 34 different stimulus persons. In this fashion it was possible to systematically investigate the effects of the stimulus person's characteristics and of the type of behavior on the subjects' intentions. Specifically, Triandis varied the stimulus person in terms of race (Negro-white), sex (male-female), age (20-50 years), occupation (physician-soda fountain clerk), and religion (Protestant-Roman Catholic-Jewish). Although all possible combinations of the variables would require 48 stimulus persons ($2 \times 2 \times 2 \times 2 \times 3$), Triandis eliminated unlikely combinations that might antagonize subjects (e.g., Jewish Negroes, 20-year-old physicians). Each of the remaining 34 stimulus persons was rated on 64 behavioral intentions. These responses were factor-analyzed, and five factors were obtained (see Table 7.2).

Using an analysis of variance, Triandis found that the five stimulus characteristics had different effects on the five types of general intentions obtained in the factor analysis. Table 7.8 shows the percentage of variance accounted for by the five stimulus characteristics. The percentage of variance accounted for by a given stimulus factor (race, religion, etc.) may be viewed as an estimate of that factor's relative importance in determining subjects' responses. For example, although race accounted for 38 percent of the variance in intentions to show

Table 7.8 Relative Importance of Stimulus Characteristics for Five Types of Intention (Adapted from Triandis, 1964)

Stimulus characteristic	Formal social acceptance	Marital acceptance	Friendship acceptance	Social distance	Subordination-superordination
Age (A)	2.5 *	16.2	8.8	21.0	2.5
Sex (S)	—	17.9	51.0	—	—
Religion (Re)	4.4	1.4	4.4	10.0	5.4
Race (Ra)	38.4	23.6	3.3	—	—
Occupation (O)	37.8	—	—	—	10.2
A × S	—	8.2	3.1	5.3	—
A × Re	—	—	1.8	3.9	—
A × Ra	.9	7.9	3.0	7.9	—
S × Re	1.1	—	—	—	14.1
S × Ra	.6	9.2	—	—	—
Re × O	1.5	—	1.8	3.1	—

* Percent of variance accounted for by significant effects.

formal social acceptance and 24 percent of the variance in intentions to show marital acceptance, it accounted only for 3 percent of the variance in intentions to show friendship acceptance and for none of the variance in the remaining two intentional factors (social distance and subordination).

The results shown in Table 7.8 indicate that a subject's intentions are influenced by variations in the intention's target element, as well as by variations in its behavioral element. This finding supports our argument that different intentions represent different probability dimensions, and results obtained with respect to one intention will not necessarily hold with respect to some other intention.

Subsequent investigations by Triandis and his associates (Triandis, 1967; Triandis and Davis, 1965; Davis and Grobstein, 1966) have also shown that variations in the characteristics of the stimulus persons influence the five general intentions in different ways. Unfortunately, the results have not always been consistent. For example, in the study reported above, Triandis (1964) found that formal social acceptance was influenced most strongly by race, followed by occupation and religion; for marital acceptance race was found to be most important, followed by sex and age. In contrast, Davis and Grobstein (1966) found that formal social acceptance was most influenced by occupation, followed by religion and race, and that sex was more important than race in determining marital acceptance. For a review of studies using the behavioral differential to investigate the effects of target variations on different types of intentions, see Triandis (1967).

Race versus belief similarity. Triandis's interest in the effects of stimulus characteristics on intentions grew out of his work on the determinants of racial prejudice. Triandis and Triandis (1960) argued that previous research on prejudice had produced ambiguous results since the basis for discrimination was unclear. "When an American white subject indicates much social distance toward Negroes, it is difficult to know whether he rejects them because of their physical type or their probable lower class background. Or, to take another example, when an American shows social distance toward Irishmen, does he object to their nationality or to their probable religion (Roman Catholic)?" (Triandis and Triandis, 1965, p. 208) In order to answer these questions, Triandis and Triandis (1960) constructed 16 stimulus persons who varied in terms of *race* (black-white), *religion* (same as-different from subject's religion), *nationality* (high status: English, Swedish, French-low status: Portuguese, Italian, Greek), and *social class* (high status: physician, banker, civil engineer-low status: unskilled worker, coal miner, truck driver). All possible combinations of these characteristics formed the 16 stimulus persons in a $2 \times 2 \times 2 \times 2$ analysis-of-variance design. To give an example, one stimulus person was described as "Negro, different religion, Portuguese, physician," another as "Swedish, physician, white, same religion."

To measure prejudice with respect to each of these 16 stimulus persons, Triandis and Triandis developed a 15-item Thurstone scale, using intentional items such as "I would accept this person as an intimate friend," "I would accept

this person as a neighbor," and "I would not permit this person's attendance of our universities." Subjects were asked to check the statements they agreed with, and a single "social distance" score was obtained. Thus, although the items on the questionnaire represent individual intentions, the dependent variable in the study can best be viewed as a measure of global intention or attitude.

An analysis of variance showed that global intentions toward the stimulus persons were influenced by all four characteristics. Race was found to be the most important factor, accounting for 77 percent of the variance in the dependent variable, followed by social class (17 percent), religion (5 percent), and nationality (1 percent). The interactions between these factors were not significant.⁹

In contrast to this conclusion that race is the most important determinant of prejudice, Rokeach's (1960) theory of dogmatism and prejudice led him to propose that "what appears at first glance to be discriminations among men on the basis of race or ethnic group may turn out upon closer analysis to be discriminations on the basis of belief congruence over specific issues" (Rokeach, Smith, and Evans, 1960, p. 135). To test this hypothesis, the investigators described stimulus persons as Negro or white and as taking a pro or con stand on eight issues, such as socialized medicine, communism, and desegregation. Descriptions of stimulus persons were presented in pairs, such as the following.

1. a) A white person who believes in God.
b) A Negro who believes in God.
2. a) A white person who is for socialized medicine.
b) A white person who is against socialized medicine.
3. a) A white person who is a communist.
b) A Negro who is anti-communist.

Since the subject's stand on each issue was assessed at the beginning of the experiment, it was possible to classify these descriptions as dealing with a black or white person who agreed or disagreed with the subject. Each stimulus person was rated on a nine-point scale varying from "I *can't* see myself being friends with such a person" to "I can *very easily* see myself being friends with such a person." Although the design and analysis of the study make it difficult to draw unequivocal conclusions,¹⁰ Rokeach, Smith, and Evans (1960) argued that the findings sup-

9. The reader will note the similarity of this study to research on impression formation. Stimulus characteristics replace trait descriptions, and the results are again consistent with a linear model in that they show no significant interaction effects.

10. The hypothesis of this study could have been tested in a simple 2×2 factorial design with main effects of race (white versus black) and belief similarity (similar versus different); the eight different issues could have been considered another factor in the design. In contrast to this simple analysis, Rokeach, Smith and Evans constructed 48 pairs of stimulus persons, computed differences between attitudes toward the members of each pair, and then counted the number of subjects who preferred one member over the other.

ported their hypothesis in showing that belief similarity was a more important determinant of "prejudice" than was race per se.

Responding to this study, Triandis (1961) took issue with the dependent measure of "prejudice" employed. He suggested that friendship choice involves only one level of social distance, and that a more appropriate measure of general prejudice (such as his own social distance scale, described above) would show the importance of race as a determinant of prejudice.¹¹ Using the same procedure as in the Triandis and Triandis (1960) study, he constructed 16 stimulus persons varying in terms of race (Negro-white), religion (same-different), occupation (bank manager-coal miner), and belief similarity (same-different philosophy of life). The 15-item social distance scale served again as a measure of attitude toward each stimulus person. The results of an analysis of variance showed that all four factors significantly influenced attitudes, and that the interactions were not significant. In support of Triandis's hypothesis, race was the most important determinant of prejudice (accounting for 59 percent of the variance), followed by occupation (18 percent), philosophy (16 percent), and religion (5 percent).

Rokeach (1961) criticized the study by Triandis and argued that the different results had nothing to do with the dependent measure of prejudice but could instead be attributed to differences in the manipulation of belief similarity. Whereas Rokeach and his associates had used specific belief items (such as belief in God), Triandis had varied stimulus persons in terms of same versus different philosophy of life, a general and rather vague concept.

Perhaps a more adequate manipulation of belief similarity was provided by Byrne and Wong (1962), who used Byrne's attraction paradigm (see Chapter 6) to construct a hypothetical stranger, who was described either as Negro or white, and who either agreed or disagreed with the subject on 26 opinion items. Attitudes toward the stranger were measured on Byrne's Interpersonal Judgment Scale. The two items measuring attraction showed a significant effect of belief similarity, as well as a significant interaction between belief similarity and race. No significant main effect of race was obtained. Byrne and Wong concluded that belief similarity is a more important determinant of prejudice than is race of the stimulus person.

Stein, Hardyck, and Smith (1965) tried to resolve the belief versus race controversy by using Byrne's procedure to manipulate belief similarity and by measuring "prejudice" in ways similar to both those of Rokeach, Smith, and Evans (1960) and Triandis (1961). Their teenage subjects were shown a questionnaire ostensibly filled out by a black or white person. The stranger's similarity to the subject was manipulated by varying his responses to 25 opinion items dealing with behavior of teenagers. Two measures of prejudice were obtained. The first, similar to the one used by Rokeach *et al.*, was a five-point scale ranging from

11. Although Triandis (1961) clearly employed a measure of global intention or attitude, it is not clear to what extent Rokeach, Smith, and Evans's (1960) measure of "friendship choice" is related to the evaluative dimension.

“I would feel quite friendly” to “I would feel quite unfriendly”; it was designed to measure the subject’s immediate reaction to the stranger. The second measure, a modified version of Triandis’s (1961) social distance scale, consisted of 11 intentions suitable for use with teenage subjects, and the sum over these scales served as a measure of prejudice.

Consistent with the results of Rokeach, Smith, and Evans (1960) and Byrne and Wong (1962), both measures showed that belief similarity was a more important determinant of prejudice, although the effect of race was also significant. Thus there appeared to be considerable evidence that belief similarity, rather than race per se, was the more important determinant of “prejudice” toward another person. Note, however, that all results discussed thus far have been concerned with the effects of race versus belief similarity on *attitudes* or global intentions with respect to the stimulus persons, and it is not clear that the same results would obtain for measures of specific intentions. In fact, Stein, Hardyck, and Smith (1965) also reported separate analyses for each of the 11 behavioral intentions on their social distance scale. They found that although belief similarity was more important than race on nine of these intentions, the reverse was true for intentions to “invite the stimulus person home to dinner” and to “have the stimulus person date my sister (brother).”

It was at this stage that Triandis (1964) developed his behavioral differential and found that variations in stimulus characteristics tend to have different effects on different kinds of intentions. On the basis of these findings, Triandis and Davis (1965) argued that part of the confusion in previous discussions of the controversy concerning race versus belief similarity stems from the assumption that prejudice is a unidimensional construct. They suggested that conflicting findings are to be expected since the results of any given study will depend on the kind of dependent measure involved. To test these notions, Triandis and Davis constructed eight stimulus persons varying in sex (male–female), race (Negro–white) and opinion on civil rights (favorable toward strong civil rights legislation–opposed to major changes in status quo on civil rights). Subjects were asked to rate each person on a semantic differential measure of attitude as well as on a 15-item form of Triandis’s behavioral differential measure containing three items representing each of the five intentional factors obtained in the study by Triandis (1964; see Table 7.2). Thus, with respect to each stimulus person, Triandis and Davis had a measure of attitude and a score for each of five general intentions.

The results of the study are summarized in Table 7.9. Consistent with the earlier studies by Rokeach, Smith, and Evans (1960), Byrne and Wong (1962), and Stein, Hardyck, and Smith (1965), attitudes toward the stimulus person were found to be influenced most strongly by belief, followed by race and sex. The same results were obtained for the first intentional factor (formal social acceptance), which, as indicated earlier, can best be viewed as an evaluative dimension and thus constitutes another measure of attitude. As might be expected, sex was found to be most important for marital intentions, followed by race and beliefs. Finally, consistent with the argument that race is more important than belief in

Table 7.9 Relative Importance of Race, Belief, and Sex as Determinants of Attitudes and Intentions (Triandis and Davis, 1965).

Order of importance	Attitude	Intentions				
		Formal social acceptance	Marital acceptance	Friendship acceptance	Social distance	Subordination
First	belief	belief	sex	race	race	race
Second	race	race	race	belief	belief	belief
Third	sex	sex	belief	sex	sex	sex

determining some aspects of prejudice, race was found to be the most important determinant of the remaining three intentions (friendship acceptance, social distance, and subordination).¹²

The race versus belief similarity controversy in reference to prejudice is thus resolved in part once it is realized that race and belief similarity have different effects on different measures of "prejudice," i.e., on attitudes and on different dimensions of behavioral intentions. Several problems still remain unresolved. For instance, in his initial study Triandis (1961) found race to be a more important determinant of global intention or attitude than belief similarity whereas later studies have consistently found the reverse effects. These inconsistent findings with respect to the effects of stimulus characteristics on attitudes are not unlike the inconsistent findings concerning the effects of stimulus characteristics on different intentional factors. Results of this kind indicate that although characteristics of the target person influence attitudes and intentions, the process by which these characteristics exert their influence is unclear.

Analysis of Variations in Target Characteristics

The studies discussed above are not unlike the research on impression formation and on interpersonal attraction in that subjects are given information about a stimulus person and are asked to evaluate the person or to judge the likelihood that they would perform various behaviors with respect to the person. In previous chapters we have seen that the information provided to the subject allows him to form descriptive and inferential beliefs about the stimulus person. These beliefs

12. Note, however, that this study did not manipulate belief *similarity* but instead examined the effects of the stimulus person's civil rights position irrespective of the subject's own stand on that issue. If belief *similarity*, rather than belief *per se*, had been manipulated, it is possible that belief similarity would always have had a stronger effect on intentions than race. Several more recent studies, however, have manipulated belief similarity and have provided some more direct support for the Triandis and Davis hypothesis (Insko and Robinson, 1967; Robinson and Insko, 1969).

may have several effects. First, they may influence the subject's attitude toward the stimulus person. In order to understand these effects on attitudes, it is necessary to measure belief strength and attribute evaluations. Without such measures, results may appear contradictory. In fact, we have seen that although attitudes or global intentions tend to be influenced by variations in target characteristics, the results have been somewhat inconsistent.¹³

A second possibility is that the beliefs formed about the target person may influence attitudes toward specific behaviors with respect to the person (A_B) or subjective norms (SN). From the point of view of our model for the prediction of intentions, inconsistent effects of stimulus variations on specific intentions are not unexpected. Variations in these characteristics may influence attitudes toward performing some behaviors with respect to the target person but not others. Further, for some behaviors the attitude may become more favorable, and for others it may become less favorable. The same can be said for the effects of variations in target characteristics on the normative component. Again, these effects on the normative component may differ with respect to different behaviors. To exemplify, consider the effects of a race manipulation on two intentions: the subject's intention to admit the stimulus person (black or white) to his tennis club and his intention to admit the person to his golf club. Suppose that the subject intends to admit the white stimulus person, rather than the black stimulus person, to his tennis club but intends to admit the black rather than the white person to his golf club. The apparent inconsistency can be resolved by considering the determinants of the intentions involved. Most obviously, the subject may hold different subjective norms concerning the two behaviors. He may believe that most important others think he should not admit blacks to the tennis club, but he may believe that these same referents think he should admit blacks to the golf club.

Alternatively, the race variable's locus of effect may be in the attitudinal component. The subject might believe, for example, that admitting a black to the tennis club would lead to more negative consequences than admitting a white person. With respect to the golf club, however, he may believe that admitting a black would lead to more positive consequences than admitting a white. The subject would therefore have a more favorable attitude toward admitting the white rather than the black person to the tennis club, whereas the reverse would be true with respect to the golf club.

Thus variations in characteristics of the stimulus person may or may not influence attitudes toward the behavior in question and may or may not influence the corresponding subjective norms. Further, some behavioral intentions may be primarily under attitudinal control, and others may be primarily determined by the normative component. Without knowledge of the relative weights of the two components and the loci of effect of a given manipulation, it is impossible to gain

13. Even if consistent results are obtained, effects on attitudes toward the target person may be unrelated to intentions to perform specific behaviors with respect to that person.

a clear understanding of the influence of that manipulation on behavioral intentions.

Relative Importance of Intentional Elements

Although most investigators recognize the importance of the situation, the studies discussed above have made no attempts to examine the effects of situational variations on behavioral intentions. The relative importance of situational variations on intentions has been investigated intensively by Sandell (1968) and Bishop and Witt (1970). Sandell studied the effects of situational and target elements on the intention to drink. The targets were 10 beverages, such as coffee, liquor, water, and wine. Situations were varied by asking subjects to indicate, on a seven-point scale, whether they would “willingly” or “unwillingly” drink each of the 10 beverages, in seven different situations. The situations included “when really thirsty,” “when alone,” “with a really delicious piece of meat,” etc. Each subject, then, made 70 judgments in the 10×7 analysis of variance design. “Subjects” was included as an additional factor in the data analysis in order to determine the extent to which intentions were influenced by individual differences among subjects. Used in this manner, the analysis of variance allows the investigator to estimate the amount of variance in drinking intentions attributable to individual differences, type of drink (target), and situational variations.

In a similar fashion Bishop and Witt (1970) investigated effects of behavioral and situational or time variations on intentions to engage in different leisure-time activities. Their subjects were asked to indicate on a five-point scale whether they would or would not perform each of 13 leisure-time activities, such as “watch television,” “visit a friend,” “spend time in the out-of-doors walking or hiking,” and “find a quiet place to sit and relax by myself.” Subjects indicated their intentions to perform these activities in each of ten situation-time combinations, including the following.

1. You have just gotten results from the biggest exam of the year and you have either failed or not done as well as you expected to do.
2. Today you got up full of energy and never really wanted to go to class. As a result, the long hours of sitting in lectures has made you very restless. It is now afternoon and you have finished your last class.
3. You get back from the library where you have had a great deal of trouble studying due to the incessant noise.

In this study, then, each subject made 130 judgments in a 10×13 analysis of variance design; a subject factor was again included. The analysis of variance thus permitted estimates of the amount of variance in intentions to perform leisure-time activities accounted for by individual differences, the type of activity (behavior), and situational or time variations. Table 7.10 summarizes the results of the studies by Sandell (1968) and by Bishop and Witt (1970).

The first thing to note in Table 7.10 is that situational variations in and of themselves account for relatively little variance in intentions. In fact, in both

Table 7.10 Amount of Variance in Intentions Attributable to Individual Differences, Situational Variations, and Target or Behavior
(Adapted from Sandell, 1968, and Bishop and Witt, 1970)

Source of variation	Variance, %	
	Sandell	Bishop and Witt (male Kentucky sample)
Individual differences (A)	.5	6.4
Situational variations (B)	2.7	3.3
Target or behavior (C)	14.6	9.3
A × B	2.7	5.4
A × C	11.8	21.2
B × C	39.8	7.7
A × B × C	27.8	46.7

studies over 80 percent of the variance is attributable to the interactions rather than to the main effects.¹⁴ The Sandell study shows that among the three variables studied, the type of drink (target) had the strongest effect on intentions. This indicates that subjects intended to drink some beverages and not others, irrespective of the situation. The greatest amount of variance, however, was due to the interaction between situation and target. Not too surprisingly, subjects indicated that they would drink certain beverages in some situations but not in others. The large triple interaction indicates that even here, however, there exist considerable individual differences.

The Bishop and Witt study shows that some leisure-time activities are pursued more than others, irrespective of the situation. The interaction between leisure-time activities and individual differences indicates that subjects differ in their intentions to perform various behaviors. However, the largest effect is the triple interaction, suggesting that these individual differences in intentions depend in large part on the situation.

The results of these two studies, then, clearly indicate that variations in any of the four aspects of intentions (behavior, target, situation, and time) will influence the likelihood that a person will intend to perform the behavior in question. Further, the studies show that these four aspects of intentions are not independent and that the effect of variations in one aspect depends in part on the other aspects. Finally, these studies also provide evidence that individual differences can influence behavioral intentions.

Individual Difference Variables

Although there seems to be little question that different people hold different intentions, the studies by Sandell (1968) and by Bishop and Witt (1970) do not

14. Note that these findings cannot be accounted for by a linear model.

identify the dimensions along which individuals differ. Most of the studies discussed earlier that have dealt with effects of target characteristics on intentions have also obtained measures of various individual difference variables and have examined their effects on intentions. For example, Triandis (1964) performed separate factor analyses for Catholic, Protestant, and Jewish subjects, for male and female subjects, and for subjects high or low on authoritarianism. Although there was some similarity in the intentional factors that emerged for these samples of subjects, several important differences were also observed. For example, five factors emerged for low authoritarian subjects, but only three emerged for subjects high in authoritarianism. Similarly, the stimulus person's age was the most important determinant of social distance for Protestant males, but for Catholic males it was the stimulus person's sex. Many cross-cultural studies have found that the subject's nationality influences his intentions (cf. Triandis, 1967). With respect to friendship acceptance, for example, the religion of the stimulus person was most important for Japanese males, the sex for Indian males, and the age for American males.

There can be little doubt, then, that individual difference variables are related to behavioral intentions. The results, however, do not seem to reveal any systematic pattern. The same conclusion emerges from a study by Posavac and Triandis (1968), who reported an intensive investigation of the relation between various personality variables and intentional patterns. Using factor analysis, they identified four types of subjects differing in their patterns of behavioral intentions with respect to 16 stimulus persons.¹⁵ The different personality variables were found to be unrelated to these subject types, indicating that subjects who differ greatly in terms of their intentions do not seem to differ systematically in terms of their personalities.

Situational Variations and Social Norms

One individual difference variable that has received considerable attention is the subject's racial prejudice. The usual assumption has been that highly prejudiced subjects will discriminate against blacks, whereas race will be of little importance for the intentions of nonprejudiced subjects. Earlier in this chapter we reviewed a number of studies dealing with intentions to be photographed with a black person under various conditions. We noted that there was little evidence for a relation between attitudes toward blacks and intentions to be photographed with blacks.

In order to explain their rather low relation between attitudes and intentions, DeFleur and Westie (1958) proposed that "the act of signing the photograph agreement involves a conscious consideration of reference groups" (p. 671). In order to test this notion, they asked their subjects if there was any particular person or group of people who came to mind when they decided to sign (or re-

15. These types of subjects were identified in the same way that N. Wiggins, Hoffman, and Taber (1969) isolated their types of judges (see Chapter 5).

fused to sign) the photographic release agreements, and whether there were any people who the subjects felt would approve or disapprove of their signing the agreements. On the basis of responses to these questions, DeFleur and Westie concluded that subjects make "significant use of their beliefs concerning possible approval or disapproval of reference groups as guides for behavior" (1958, p. 672). The low relation between attitudes and intentions was thus explained by assuming that perceived pressures of reference groups induce subjects to "behave" in ways inconsistent with their attitudes.

Linn (1965) conducted a postexperimental interview with his subjects in order to further examine the influence of perceived social pressures or norms, and like DeFleur and Westie, he concluded that the low relation between attitudes and intentions in his study could be due to these factors. His interviews suggested that other variables may also have to be considered: amount of anticipated interaction with the attitude object, the degree of visibility of this interaction, the people who may view it, and the consequences (positive or negative) that might arise.

Some of these factors have been examined in later studies. For example, J. A. Green (1972) manipulated two situational factors: the intimacy of the relationship expressed in the picture for which subjects were asked to pose and the amount of exposure each picture would get. Intentions to pose for the picture declined significantly with degree of intimacy; that is, subjects were less willing to pose for a photograph if it was to involve a high degree of intimacy with a black person. Contrary to expectations, degree of exposure did not significantly influence willingness to pose for the photograph.¹⁶

A study by Warner and DeFleur (1969), however, reported an effect of exposure on various intentions. These investigators sent letters through the mail asking students to sign a pledge to perform a certain behavior, or to indicate their disapproval of the behavior. Among the eight behaviors used were "contributing money to a civil rights organization," "attending a dinner to welcome ten Negro students to campus," and "endorsing an appeal to seek out qualified Negro candidates for public office." For half the subjects, the letter indicated that their responses would be completely anonymous; the other half were told that their pledges would be publicized in the student newspaper. Although anticipated exposure had little effect on responses of nonprejudiced students, students with negative attitudes toward blacks were found to be more willing to pledge performance of behaviors when their pledges would not be publicized.

In a study by Bronfenbrenner (1970) children were given descriptions of hypothetical situations in which they had to decide whether or not to go along with their friends. In one situation, for example, they had to decide whether they would go to a movie recommended by friends but disapproved by parents. Subjects' intentions to go along with their friends were measured on a six-point scale ranging from *absolutely certain I would refuse* to *absolutely certain I would go along*

16. The exposure \times intimacy interaction was significant but difficult to interpret.

with my friends. The children were assigned to one of three experimental conditions of exposure: (1) No one except the investigator would see their responses. (2) Their parents as well as the parents of other children would see their responses. (3) The other children in the class would see their responses. The results indicated that these situational variations influenced behavioral intentions. American children were most likely to intend to go along with their friends in the third condition and least likely to do so in the second condition. Although children in the Soviet Union were also least likely to indicate that they would go along with their friends in the second condition, they were most likely to do so in the first condition.

All these studies, then, provide further support that situational variations influence a person's intentions. They also suggest that situational variations may influence perceived social norms and reference group pressures. Note, however, that the studies discussed so far have not measured perceived social pressures directly but have merely assumed that variations in degree of exposure influence the extent to which social norms are operative in a given situation.

The influence of perceived social pressures on intentions has been studied more directly by Mezei (1971), who constructed four stimulus persons varying in race (black-white) and belief similarity (pro-Communism-anti-Communism). Subjects indicated, on a seven-point scale, their intentions to perform each of 10 behaviors with respect to these stimulus persons. In addition, they also indicated whether their parents and friends would engage in each of these behaviors, on the same seven-point scales. The results reported by Mezei show that a subject's own intentions to perform various behaviors are strongly related to his perception of the intentions of his family and friends.¹⁷

Goldstein and Davis (1972) also examined normative influences by asking subjects to indicate the extent to which their parents and friends would approve or disapprove of their engaging in each of three interracial behaviors varying in intimacy (eat with, go on a trip with, and introduce to a relative as a blind date). The more intimate the behavior, the more subjects believed that their parents and friends would disapprove of it. This finding may explain the lower intentions for intimate behaviors found in some studies.

Analysis of Variations in Intentional Elements and Individual Differences

In this section we have seen evidence that variations in target, behavior, situation, and time influence the person's willingness to perform the behavior in question. For example, subjects were found to be willing to drink one kind of beverage but

17. Mezei (1971) was primarily interested in differences between intentions with respect to stimulus persons varying in race and belief similarity. He thus reported only correlations between difference scores, which are not readily interpretable and which make it impossible to determine the relative influence of social pressures on different types of intentions.

not another, to drink a given beverage in one situation but not another, to perform a certain leisure-time activity under some conditions but not others, and to be photographed with a black person in a nonintimate rather than an intimate situation.

From our point of view, such variations introduce changes in the nature of the intention, and different results are to be expected. When a person is asked whether he would perform a given behavior with respect to one person as opposed to another, or in one situation rather than another, it is our point of view that different intentions are being assessed. Although it is usually acknowledged that variations in an intention's behavioral element result in different intentions, it is often not recognized that the same is true for variations in the intention's target, situational, and time elements. We have repeatedly argued that different intentions represent different probability dimensions, and results obtained with respect to one intention may not generalize to other intentions.

Most research efforts in this area have been primarily descriptive attempts to explore effects of variations in target, behavior, situation, and time on one or more measures of intentions. From our point of view, these effects can be understood only when the processes intervening between stimulus and response variables are explicated. Like variations in target characteristics discussed earlier, variations in any other element constituting the intention may influence attitudes toward the behavior and subjective norms. It seems clear that situations may, but need not always, influence the perceived consequences of (and hence attitude toward) performance of a given behavior. Similarly, some of the studies reviewed suggested that variations in intentional elements can influence subjective norms. If the effects of variations in intentional elements on the attitudinal and normative components were assessed, it would be possible to understand their effects on a given intention.

These considerations also apply to individual difference variables, such as the subject's sex, religion, attitude toward the stimulus person, etc. For example, it appears reasonable to assume that Catholics and Protestants have different beliefs about (and hence attitudes toward) using birth control pills; but they may not differ in their beliefs about the consequences of attending church services regularly. The same may be true for the normative beliefs of Catholics and Protestants. Thus both groups of people may believe that their respective churches expect them to attend services regularly—but only Catholics may see their church as condemning the use of birth control pills. Finally, these two intentions may be primarily determined by normative considerations for Catholics, and primarily by attitudinal considerations for Protestants. In fact, many individual difference variables may affect intentions by influencing the relative weights of the two components. With respect to some intentions, men and women, people of different nationalities, and people differing in personality (e.g., authoritarianism) may place differential weights on the attitudinal and normative components. With respect to other intentions, there may be no differences between these groups of

people in the weights they place on the two components. It follows that individual difference variables (like variations in intentional elements) may be related to some behavioral intentions but not to others.

CONCLUSION

In this chapter we have considered factors influencing the formation of behavioral intentions. The interest in behavioral intentions as a focus of investigation is only of relatively recent origin. Although social psychologists have often drawn a conceptual distinction between cognitive, affective, and conative components of attitude, this distinction has been neglected in most empirical research. Measures of beliefs, attitudes, and intentions have often been used interchangeably, on the assumption that these measures all serve as indicants of a person's "attitude." Consistent with this view is the general assumption that if a person likes some object he should also hold favorable beliefs about the object, and he should intend to perform and actually perform favorable behaviors with respect to it. In the two preceding chapters we tried to show that the assumption of a close link between attitudes, beliefs, and intentions is justified only at a very global level. In Chapter 6 we saw that although a person's attitude toward some object is a function of his salient beliefs about the object's attributes (and his evaluations of those attributes), and although that attitude is related to the totality of his beliefs, there is no necessary correspondence between attitude and any given belief. Similarly, the present chapter has made it clear that attitude toward an object is related to the totality of a person's intentions with respect to the object (taking the intentions' evaluative implications into account), but it may be unrelated to any given intention.

Given the inconsistent relation between attitude toward an object and specific intentions with respect to that object, it is obvious that traditional measures of attitude are usually not a sufficient basis for predicting intentions. In contrast to this traditional attitudinal approach, we described a theory which specifies the immediate determinants of an individual's intention to engage in a given behavior and thus provides the means for predicting such intentions. On the basis of Dulany's (1968) theory, Fishbein (1967b) proposed that a person's intention to perform a given behavior is a function of two basic determinants, one attitudinal and the other normative. The attitudinal component refers to the person's attitude toward performing the behavior in question; the normative component (i.e., the subjective norm) is related to the person's beliefs that relevant referents think he should or should not perform the behavior and his motivation to comply with the referents. Thus the formation of a given intention depends on the prior formation of a particular attitude (i.e., attitude toward the behavior in question) and of a particular belief (i.e., subjective norm). In previous chapters we have shown that different processes underlie the formation of beliefs and attitudes. The present chapter demonstrates that still different processes are involved in the formation of intentions. These considerations again emphasize the necessity for treating be-

liefs, attitudes, and intentions as different concepts instead of including them under the general label of "attitude." Research concerning race versus belief similarity as determinants of prejudice supports this argument by showing that variations in these stimulus characteristics may have differential effects on attitudes and various types of intentions.

In an attempt to understand the determinants of intentions, it is important to take their level of specificity into account. We showed that different degrees of specificity may be involved with respect to each of the four elements of an intention: behavior, target, situation, and time. According to the theory of intentions discussed in this chapter, intentions at any level of specificity are determined by attitude toward the behavior in question (A_B) and subjective norm (SN). Accurate prediction of a given intention, however, can be expected only when the attitudinal and normative components of the model are measured at the same level of specificity as is the intention.

In addition to providing a means for the prediction of intentions, the theory also suggests an explanation for the apparently inconsistent findings concerning effects of various experimental manipulations on intentions. We have reviewed different lines of research showing that although variations in target characteristics, behaviors, and situations, as well as individual differences, are often related to one intention or another, these effects have been inconsistent and have not led to a systematically integrated body of knowledge concerning the determinants of intentions. The most that can be said is that various factors influence intentions, but the basis for their effects is not well understood, and it is usually impossible to tell in advance what, if anything, the effect of a given variable will be. For example, investigators have found that differences in intentions to perform behaviors with respect to black and white stimulus persons sometimes favor blacks, sometimes whites, and sometimes no significant difference is obtained. These apparently inconsistent results can be explained by examining the effects of race on the attitudinal and normative components of the theory. Variations in race will affect the attitudinal component only to the extent that subjects hold different beliefs about the consequences of performing the behavior in question with respect to blacks as opposed to whites, or that they evaluate the consequences differently. Similarly, variations in race will influence the normative component only to the extent that subjects hold different normative beliefs about performing the behavior with respect to blacks and whites, or that their motivation to comply with relevant referents differs when the target person is black rather than white. Since race of the target person may or may not influence beliefs about the consequences of performing a given behavior with respect to the target person, and since it may or may not influence the normative component, the relation between race and intentions will be inconsistent. The same reasoning can be applied to explain the inconsistent relations between other variables and intentions. Thus this chapter also made it clear that there is no necessary relation between traditional measures of attitude toward some object and intentions to perform any given behavior with respect to that object.

Figure 7.2 summarizes our conceptual framework for an understanding of the formation of intentions. The reader can see that we are again advocating an approach which explicates the processes intervening between stimulus and response variables. The figure shows that intentions are determined by two intervening variables, A_B and SN . Consistent with our discussion in Chapter 6, attitude toward the behavior is a function of beliefs about the behavior's consequences and evaluations of those consequences. To understand the formation of A_B , one must examine the effects of stimulus conditions on the beliefs and evaluations. Figure 7.2 also shows that subjective norm is a function of normative beliefs and motivation to comply, which are in turn based on the information a person has about his relevant referents. We have discussed several processes whereby the person may use this information to infer normative beliefs concerning a given referent. We have tentatively suggested that his beliefs about the referent's power and his beliefs about the consequences of complying with the referent may influence his motivation to comply. A complete understanding of the ways in which the normative component is formed would require first that the relation between the informational base and this component be specified, and second that we examine the effects of stimulus conditions on the informational base. To account for the effects of a given variable on intentions, however, it is sufficient to know the variable's effects on the attitudinal and normative components. Since it is possible to obtain direct measures of A_B and SN , it is possible to study the effects of a given variable on the two components and to use this information to predict behavioral intentions.

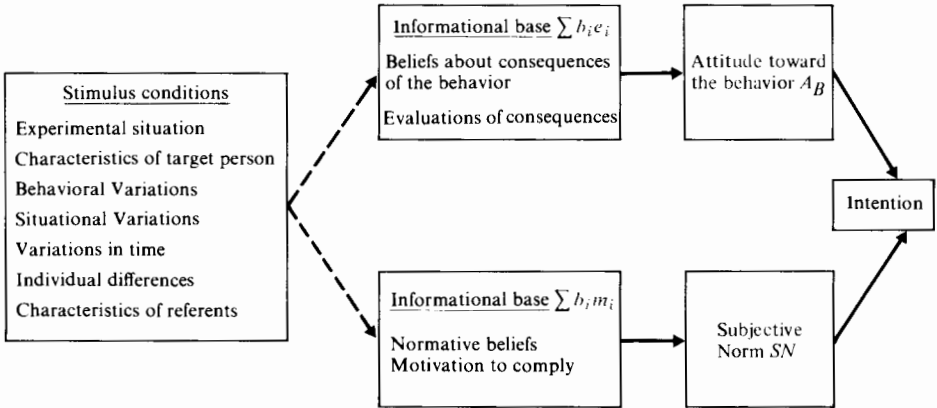


Fig. 7.2 Schematic representation of effects of stimulus variables on intentions.