A Study on the Prediction of Married Couples' Behavior

Min, Kyung-Hwan

Department of Psychology, Seoul National University

INTRODUCTION

Prediction of behavior from a single individual

Predicting individual behavior has been a challenging and difficult task for psychologists. For example, Wicker(1969), from his comprehensive review of studies on attitude-behavior relation, reported that in most cases correlations between attitudinal predictors and behavioral criteria have been rather low or nonsignificant. The same has been true in the personality area ; personality data could not explain cross-situational inconsistencies in behavior(Mischel, 1968).

Recently many psychologists have made efforts to improve this situation. For example, Bem & Funder(1978) argued that in order to enhance predictability of a personality scale, it is essential to have a common language of description for both persons and situations. They proposed that a situation be characterized by a set of template-behavior pairs, which is a set of personality descriptions(Q-sorts) of hypothetical "ideal" persons, each one associated with a particular behavior. The Q-sort description of a particular individual is then matched against each template, and he or she is predicted to display the behavior associated with the most similar template. The correspondence between predictor variables and criterion variables has been intensively discussed in attitude-behavior research. Since attitude-behavior studies are more relevant to our topic, we will briefly discuss relevant variables identified in this direction of research.

According to Davidson & Jaccard(1979) the following variables have been

explored by researchers as moderating attitude-behavior consistency:

(1) Sequence of prior events-According to Fishbein & Jaccard(1973), the occurrrence of a target behavior is frequently dependent upon the successful completion of a sequence of prior events. Therefore, for example, even though a person has a positive attitude toward a certain candidate, he can fail to perform the criterion behavior(voting for the candidate) if he did not (or could not) go to the voting place.

(2) Attitude change-According to Schumann & Johnson(1976) attitude change may occur during the period between the measurement of attitude and the performance of behavior. Many variables contribute to attitude change including exposure to new information(Fishbein & Jaccard, 1973), the time interval between the measurement of attitude and the performance of the behavior(Kelley & Mirer, 1974 ; Schwartz, 1978), credibility of sources(Hovland & Weiss, 1951 ; Gillig & Greenwald, 1974), etc.

(3) Characteristics of respondents-Demographic characteristics of respondents such as education, age, occupation may be related to attitude-behavior consistency though research thus far has failed to confirm this hypothesis(Davidson & Jaccard, 1979 ; Min, 1980). Also some researchers emphasized personality characteristics as moderating variables(e.g., attribution tendencey by Schwartz, 1973 ; degree of self monitoring by Snyder & Tanke, 1976, etc.).

(4) Correspondence between attitudinal and behavioral variables-Several psychologists have argued that if attitude and behavior are both measured at a similar level of specificity, a reasonable degree of predictive accuracy can be obtained(Ajzen & Fishbein, 1973, 1977 ; Fishbein & Ajzen, 1974 ; Davidson & Jaccard, 1979). For example, Ajzen & Fishbein(1977) defined attitudinal and behavioral variables by four elements(action, target, context, and time) and maintained that if we increase the degree of correspondence between attitude and behavior on these elements, the obtained attitude-behavior correlation will increase.

(5) Prior experience-Fazio et al.(Fazio & Zanna, 1978 ; Fazio, Zanna, & Cooper, 1978) argued that attitudes formed through direct behavioral experience with the attitude object are more predictive of later behavior toward that object than are attitudes based upon indirect, nonbehavioral experience.

Prediction of behavior from couples

It becomes more complicated when one predicts behavior from couples than

one does from a single individual because couple decision involves two persons. Some variables we have discussed in the above section probably will be relevant here, too, but there are few studies that examine these variables in the couple decision situation. No models that are specifically relevant to couple decision making have been proposed yet. Rather, research in this area usually borrows predictive models developed in individual decision-making and asks if these models, by incorporating information only from one spouse(usually wife), could predict behavior correctly.

1. Predictive power of decision making models ; Utility models and Fishbein's model

Two kinds of model have been frequently used in this area. One is a utility model and the other is Fishbein's model.

Utility models are based on the assumption that people act in ways which maximize anticipated benefits and minimize anticipated costs(Fried & Udry, 1980). One frequently used utility model is a SEU(subjective expected utility) model. In a typical SEU model, the decision maker assigns weights to a hierarchically organized set of value categories related to a certain decision in order to indicate their relative utility to him or her. Next the decision maker assigns subjective probabilities to the categories to indicate how likely these values seem to be achieved if a positive decision were to be made. Finally the decision maker's SEU is calculated from these utilities and probabilities so that SEUs can range from. 00 to 1.00. An SEU below .50 indicates a negative decision while one above .50 indicates a positive decision(Beach, Townes, Campbell, & Keating, 1976). Beach and his collegues(Townes et al., 1977 ; Beach et al., 1979) used the SEU model to predict couples' fertility behavior. In their study(1977), they interviewed 74 married couples(highly educated, middle-class subjects) twice, a year apart. At the first interview they obtained the SEUs associated with having or not having another child for both the wife and the husband. At the second interview they determined whether the wife had become pregnant or had tried to become pregnant. They reported that they could predict the occurrence or nonoccurrence of a pregnancy attempt quite well. Among couples for whom they predicted there would be no pregnancy, there were very few pregnancies or attempts, while among those for whom pregnancy was predicted about half reported a pregnancy attempt. In a later stage of their study(1979) they interviewed 188 married couples(highly edu-

cated, middle-class whites). Predictions were made about whether or not each couple would decide to have a(another) child within the ensuing 2 years. Results showed that a SEU model predicted very well(72% correct).

Fishbein's model(Fishbein, 1967) came from social psychologists' efforts to improve upon attitude-behavior consistency(for traditional attitude models, see Edwards, 1957). Fishbein & Ajzen(1975) argued that behavioral intention(BI) is a strong predictor for the behavior if there is a high corespondence in the level of specificity between them, and also there is no intervention which alters the intention. BI is predicted from two components ; a person's attitude toward performing the behavior and the influence of his social normative environment on the behavior. Algebraically the model is expressed as follows :

$$BI = (\sum_{i=1}^{n} BiEi)W1 + (\sum_{i=1}^{m} NBiMCi)W2$$

Where BI=the behavioral intention to perform the behavior in question, Bi= the belief(perceived probability) that performing the behavior will lead to some consequence Xi, Ei=the evaluation of Xi, n=the number of salient consequences, NBi=the perceived expectation of referent i, MCi=the motiva- tion to comply with referent i, m=the number of salient referents, and W1 and W2=empirically determined regression weights.

Davidson & Jaccard(1979) interviewed 244 white, married women three times at one year intervals. For each subject the two components of the Fishbein model(attitudinal and normative component) were measured about having a(another) child during the next two years. Dependent variables were births and attempts to become pregnant within 2 year period. The Fishbein model was confirmed to be a good predictive model : The multiple correla- tion(R) obtained from the two components was .508 when only actual occurrence of birth was used as a criterion. When behavioral criteria included both actual birth and attempted conception, the multiple R went up to .595. Vinokur-Kaplan(1978) also tested the predictability of Fishbein's model. In her study 141 white, married couples were interviewed about their considera- tions and intentions regarding whether or not to have another child. Again Fishbein's model was successful, though moderately, in predicting criterion behavior(specific behavior toward having another child) ; the multiple R was .42 for the total sample.

It is hard to say from the above studies which of the two models(utility model and Fishbein's model) gives a better prediction of behavior because there is no guarantee that subjects, operationalizations and measurements were comparable in those studies. As we stated above, both models have predicted behaviors reasonably well. Also they share many things together : They are both cognitive models and therefore, assume that human beings act based upon cognitive information collected ; As Jeccard & Davidson(1976) argued, the attitudinal component of Fishbein's model is basically equivalent to the SEU model since both are calculated from the values and probabilities of outcomes. In this context one could call the Fishbein model a modified version of the SEU model added by a normative component. Sicne several studies(Davidson & Jaccard, 1975 ; 1979 ; Min, 1980) have shown that both components in Fishbein's model contribute independent variance to the prediction, it would be safe to consider the normative aspect at least in the situation where a norm is salient.

2. Individual model vs. couple model

We have discussed in an earlier section that most family survey data were obtained from wives. It was also said that the wife-only data could lead to seriosly misguided conclusions since many studies have shown the lack of agreement between husbands and wives in many areas. The same argument is true when one wants to predict couple decisions. Here, the point is whether the model incorporating information from only one spouse(individual model) predicts couple decisions as well as the model incorporating information from both husband and wife(couple model) or not. We will focus on studies that have concentrated on fertility predictions.

Townes et al.(1977) compared the predictability of wives', husbands', and wives'-and-husbands' subjective expected utility scores for the occurrence of a pregnancy. They reported that the model using an average of wives' and husbands' scores predicted about as well as wives' scores alone, but that husbands' scores alone did not predict a pregnancy as well. However, in Vinokur-Kaplan's study, the husband model predicted fertility behavior as well as the wife model(for both models $R = .40$).

Fried, Hofferth and Udry's study(1980) produced results similar to those of Townes et al(1977). In their study, white, married couples were interviewed regarding the fertility considerations. Several outcome-related predictor5 vari-

ables and a dependent variable(fertility intentions) were measured for wife and husband separately. Regression analysis was performed for wives and husbands separately and also together. The results indicated that wife predictors alone were better than husband predictors alone, and the couple model was better than either of the individual models. However, the couple model was often only a marginal improvement over the models in which there were wife predictors alone. While the cuple model usually contained different contributing variables for each spouse, the contribution of the husband's independent variables to explaining variance in reproductive intentions was mostly redundant to the variance explained by the wife's independent variables.

However, this was not always the case. In Fried & Udry's study(1979) a sample of 280 white and 69 black young urban American couples served as subjects in a fertility study. Preictor variables were the same as the ones adopted in Fried et al.'s 1980 study, but the dependent variable was either pregnancy or attempt to be pregnant instead of behavioral intentions. The regression analysis indicated differential predictabilities of the individual model and the couple model for whites and blacks. For whites, the results generally confirmed their 1980 findings ; the wife model was mostly better than the husband model and the couple model generally predicted more variance. However, for blacks, the husband model was better than or at least as good as the wife model and the couple model predicted nearly as much variance as combined sum of variances predicted by the wife model and the husband model. From these results it is apparent that the superiority of the wife model over the husband model in fertility prediction is not universal. Rather it might be limited to middle-class whites. They also analyzed the data in terms of several demographic variables such as wife's employment, husband's participation in child care, and family income. However, except wife's employment(nonemployed wife couples were more wife-model oriented than were employed wife couples),the other two variables produced ambiguous results.

Our impression is that deciding superiority of the wife model, the husband model or the couple model is not a simple question. Many variables including the kind of decision, the norms and cultures to which decision participants belong, their socio-economic status, etc. may come into this question. Also relative power exercised by husband and wife in the specific decision situation probably will have influence.

From individual attitude to couple behavior-Analysis of the process

To predict couple behavior better it will be helpful to closely look at the process in which each spouse's attitude proceeds to its behavioral intention and then develops into couple behavior. The following framework will briefly tell us how the process proceeds. However, the reader should be warned that without support of any real data this framework is highly speculative rather than empirical : First, it is assumed that both husband and wife have developed their own attitudes toward the given act. Second, each spouse's behavioral intention to perform the act is formed from his(her) own attitude plus his(her) perception of the partner's attitude. The perception of the partner's attitude largely depends on communication between the husband and the wife. Third, couple's behavioral intention is formed from husband's behavioral intention plus wife's behavioral intention. Again couple communication plays a major role in this process. Fourth, the level of communication is largely determined by couple's educational level, attitude similarities, and marital satisfaction. Last, when the level of couple communication is low, couple's behaviral intention cannot be developed and therefore, couple's behavior is dictated by either husband's behavioral intention or wife's behavioral intention depending upon the relative power of each spouse and the role-segregatedness of the decision.

This framework produces several specific hypotheses that can be tested in the empirical research. First, more frequent couple communication will result in higher correspondence between the BIs of the husband and wife. When the two BIs are close to each other they will approach couple's BI. Second, higher correspondence between husband's BI and wife's BI in turn will lead to more accurate prediction of couple behavior. Though Coombs & Chang's Taiwan study(1981) failed to find any significant differential effect of couple's consensus on fertility-related attitudes upon the occurrence of the target behavior(child-bearing), the effect of the BI consensus upon the prediction of the behavior might be different because BI is regarded as a direct predecessor of actual behavior. Third, a high educational level, similar attitudes in general, and a satisfactory marital life will increase the level of communication between husband and wife. Fourth, the BIs of husband and wife are more likely correlated with each other than are their attitudes because the BI's normative component incorporates the spouse's attitude indirectly. When the

hypothesis does not hold it might tell us the inaccuracy of spousal perception. Finally, if husband is dominant and/or the given decision belongs to the male area, husband's BI could predict couple behavior more accurately. On the other hand, if wife is dominant and/or the given decision belongs to the female area, wife's BI would be a better predictor of couple behavior.

Our long discussion thus far has led us to a basic question ; what is couple behavior and how is it different from individual behavior? Generally an individual behavior refers to the behavior that is performed by a single individual. However, this definition ignores decision-making process preceding actual behavior. Many seemingly individual behaviors have to go through couple(or family) discussions before they are performed by an individual. Therefore, couple behavior should include those behaviors that require couple discussion even though only one spouse performs the actual behavior(e.g., purchase of car or furniture, use of contraceptives, etc.). Fishbein's model predicts such behaviors well because it allows the partner's influence to be represented in one's BI. However, as we mentioned earlier, considerable discrepancy is often found between the perception or the report of husband and that of wife. Therefore, it would be ideal to get information from both husband and wife when a couple behavior is predicted.

The comparison between traditional attitude models and Fishbein's model(individual model and couple model) shows a contrast between the "closed system" versus "open system" argument. The former assumes that behavior can be predicted from one's attitude since outside influence is already represented in his attitude through the attitude forming process. On the other hand, the latter argues that the consideration of outside influence is necessary because it is independent of one's attitude, and behavior comes out from the interaction of one's attitude and outside influence. Research evidence on Fishbein's model supports the "open system" argument by showing that the normative componet has been consistently independent of the attitudinal component. Couple models are closer toward the "open system" because information is obtained directly from both husband and wife. Since an approach toward the "open system" often costs the simplicity of the model and the convenience of the research, its advantage of increased predictive power should be weighed against its costs.

METHODS

Sample and Research Design

The present data were based upon a one year, two-stage longitudinal survey. In the initial survey 378 white married couples served as respondents. They were identified through birth records of residents in Seattle, Washington. Married couples were chosen for the survey if (a) they had had their first or second child 1 to 4 years prior to the interview, (b) the wife's age at the time of the interview was 26-36 years, (c) the couple resided in the city of Seattle, and (d) neither member of the couple was sterilized.

At the second interview, one year later, 29 couples were lost to folow-up, 15 of them due to divorce or separation and 14 due to refusal of interview or moving out of the area. The present analysis was based on 349 couples who responded to both questionnaires.

Interviews

The survey was conducted by a trained female interviewer in the couple's residence. The husband and wife were given separate self-administered questionnires and sat in different areas of the house while responding to the questionnaire in order to insure independent and private responses. Approximately one hour was required for the respondents to finish the questionnaire. To insure that there was no communication between the husband and wife, the inerviewer remained in the house while the couple were completing the questionnaires. Each spouse received $7.50 for each interview.

Measurement Procedures

In the first survey measures of attitudes and behavioral intentions concerning having a child during the next 20 months were obtained. They included Aact(attitude toward an act), Fishbein's model and behavioral intention(BI) as well as relationship and demographic variables. In the second survey, one year later, respondents were queried concerning their fertility behavior and outcomes during the one-year interval.

Aact. Respondents were asked to evaluate, on a 7-point semantic differential scale with endpoint of extremely bad(-3) and extremely good(+3), their feelings about having a child during the next 20 months in a statement, "For me having a child during the next 20 months would be······"

Fishbein's model. The two components, attitudinal component(SBE) and normative component(SNB), in Fishbein's model were obtained in the follow-

ing way.

SBE : Initial elicitation interviews conducted with a sample of 30 married couples selected from a population similar to that of the couples in the longitudinal survey produced a set of 14 salient personal outcomes relevant to having a child during the next 20 months. They included, (1) strengthening couple relationship, (2) providing a better balance of boys and girls in the family, (3) restricting time and attention for present children, (4) providing companionship for present children, (5) fulfilling family life, (6) creating a burden on family finances, (7) causing a physical strain, (8) having children when they are too old for raising them, (9) having too many child-raising responsibilities, (10) interfering with work and career plans, (11) restricting husband's personal activities and interests (12) restricting wife's personal activities and interests, (13) causing tiredness and irritableness, and (14) allowing to watch another child grow and develop. These beliefs were then included in the precoded questionnaire.

Respondents made judgements of the subjective probability that having a child during the next 20 months would cause or lead to each of the above specified outcomes. Judgements ranged from 0("0% chance that having another child would cause the outcome") to 100("100% chance that having another child would cause the outcome").

Respondents also rated each outcome on a 7-point, evaluative, semantic differential scale with endpoints of extremely bad(-3) and extremely good(+3). For each respondent, the subjective probability judgement for each outcome was multiplied by the evaluation score of that outcome and these product terms were summed across the 14 outcomes, resulting in a SBE score for the person.

SNB : From the same initial elicitation interviews four normative outcomes of importance to the respondents in their decision concerning having another child were identified. They were the opinions of their spouses, their friends, their religion and their parents.

Then, subjective probability judgements(ranging from 0 to 100) were made of the likelihood that the other person(or religion) approved of the respondent having a child during the next 20 months. For each respondent the subjective probability ratings concerning the opinions of the four referents(spouse, friends, religion, parents) were summed, resulting in a SNB score for the person.[1]

Behavioral Intention(BI). To assess behavioral intention concerning having a child, respondents were presented with a statement of intention, "I will have a child during the next 20 months", and were asked on a 7-point scale, that ranged from extremely unlikely(1) to extremely likely(7), how probably it was that they and their spouses would have a child during the next 20 months.

Behavior. In the year two interview, respondents reported whether or not they and their spouses had a child(or tried to have a child) during the preceding year. Two types of behavior were obtained as measures of outcome criterion. Outcome 1 indicates whether or not couples actually became pregnant during the period and outcome 2 includes as positive decisions couples who became pregnant during the interval, while trying to become pregnant, and couples who reported that they had been trying to become pregnant for the past 2 months. All other respondents were coded as making a negative decision. Both measures of behavioral outcome were coded either 1(positive outcome or decision) or 0(negative outcome or decision).[2]

Demographic variables. Demographic characteristics of respondents were assessed in the first survey. They included rural-urban background, educational level, religion, employment, gross monthly income of the employed, age, combined gross monthly income of the husband and wife, marriage duration and the number of children in the household.

Couple relationship variables. Four couple relationship variables were also obtained in the surveys. They included power in fertility decision-making, communication in fertility decision-making, agreement in fertility decision--making and marital satisfaction. The first three variables were obtained in the year one interview while the last one(marital satisfaction) was assessed in the year two interview.

Power in fertility decision-making : To assess relative spousal power in fertility decision-making respondents were asked on a 5-point scale, that ranged from wife has almost all the influence(1) to husband has almost all the influence(5), which one(of husband and wife) has the most influence in making a decision concerning "whether or not to have another child".

Communication in fertility decision-making : To assess the frequency of communication in fertility decision-making respondents were asked on a 4-point scale with endpoints of never(1) and very often(4), how often during the past year they and their spouses had talked about "whether or not to have another child".

Agreement in fertility decision-making : To assess the degree of agreement in fertility decision-making respondents were asked to indicate on a 7-point scale, that ranged from extreme dissimilarity(1) to extreme similarity(7), how much similarity or dissimilarity there is between them and their spouses in their attitudes and opinions concerning "whether or not to have another child".

Marital satisfaction : To assess the extent of marital satisfaction respondents were asked on a 9-point scale with endpoints of entirely dissatisfied(1) and entirely satisfied(9), how satisfied, on the whole, they are with their marriage.

Footnotes

[1]The motivation to comply with normative referents(MC) was not included in the present analysis. Research has shown that MC does not add meaningful variation to the normative component.

[2]The correlation between outcome 1 and outcome 2 was r=.671. All of the analyses were done on both outcomes, and the patterns of results were the same for the two outcomes. We will emphasize outcome 2 as a criterion measure because outcome 1(actual pregnancy) often involves biological(conception) or medical(subfecundity) factors that are not controlled by the respondent's effort. Davidson and Jaccard(1979) have demonstrated that attitudinal variables are more valid indicators of outcome 2 than of outcoem 1. Those instances in which the two outcomes yield a divergent pattern of results will be reported.

RESULTS

1. Description of the Sample

Demographic Characteristics

In the present study data on a number of demographic varibles were obtained. They included husband's and wife's rural-urban background, education, religion, employment, income, age, combined family income, marriage duration and the number of children living in the household.

Table 1 shows the demographic characteristics of the present sample. The information can be summarized as follows : (1) Two-thirds of both husbands and wives came from urban area. (2) Respondents had a fairly high educational background. Over 90% of both the husbands and wives had post-highschool education, and one-third of the husbands and one-fifth of the wives had graduate degrees. (3) More than half of both husbands and wives were Protestant and one-fifth were Catholic. (4) Monthly family income was around

TABLE 1
Description of Sample

Demographic Variables		Husband	Wife
Rural-urban Background	Rural (%)	115 (33. 2)	124 (35. 5)
	Urban (%)	231 (66. 8)	225 (64. 5)
Educational level[1]	Low (%)	12 (3. 5)	29 (8. 4)
	Mid (%)	211 (61. 3)	253 (72. 9)
	High (%)	121 (35. 2)	65 (18. 7)
Religion	Protestant (%)	173 (53. 6)	191 (59. 0)
	Catholic (%)	61 (18. 9)	68 (21. 0)
	Jewish (%)	9 (2. 8)	12 (3. 7)
	Other (including "None") (%)	80 (24. 8)	53 (16. 4)
Age	Mean	32. 603	30. 677
	SD	4. 164	2. 588
Employment	Yes (%)	347 (100. 0)	127 (36. 6)
	No (%)	0 (0. 0)	220 (63. 4)
Gross monthly income of the employed	Mean	1395. 614	577. 024
	SD	759. 352	428. 236
Combined gross monthly income	Mean	1629. 428	
	SD	828. 114	
Marriage duration	Mean	7. 358	
	SD	2. 522	
# of children living in the household	One (%)	160 (45. 8)	
	Two (%)	161 (46. 1)	
	Three (%)	24 (6. 9)	
	Four (%)	4 (1. 1)	

Educational level[1] : Low=High school graduation or less,
Mid=College education or some post high school training,
High=Post college education.

$1,600 with slightly more than one third of wives working outside the home.
(5) Most husbands and wives were in their early 30's, had completed about 7
years of marriage and had one or two children.

In sum, the respondents tended to be well educated, young, white, married
parents residing in Seattle.

Fertility Attitudes, Intentions and Outcomes

Table 2 shows how many spouses had a positive attitude or intention
concerning having a(another) child during the next 20 months and how many
had a positive fertility outcome during the interval. Aact and BI served as the
measure of attitude and intention respectively, and two measures of outcom-
e(outcome 1 and outcome 2) are presented in the table.

Table 2 indicated that 48% of the respondents had a positive Aact toward
having a child during the next 20 months, 43-45% a negative Aact and 7-8% a
neutral Aact. Also about 45% of the sample had a positive BI, 54% a negative
BI, and less thean 1% a neutral BI. These patterns were almost identical for
both husbands and wives, indicating a very high level of aggregate agreement
between husbands and wives. Comparison between Aact and BI revealed that
the number of individuals with a positive Aact were slightly larger than that
of those with a positive BI(48% positive Aact vs. 45% positive BI). Accor-
dingly more respondents had a negative BI than a negative Aact(43-45%
negative Aact vs. 54% negative BI). Interestingly the biggest difference was
found in neutral cases where less than 1% of the respondents held a neutral BI

TABLE 2

Fertility Attitudes, Intentions, and Behavioral Outcomes

Attitudes, Intentions, and Behavioral Outcomes	Husband		Wife		Outcome 1	Outcome 2
	Aact	BI	Aact	BI		
Positive (%)	164 (48.4)	153 (45.1)	163 (48.1)	154 (45.4)	140 (40.2)	115 (33.7)
Negative (%)	147 (43.4)	183 (54.0)	153 (45.1)	182 (53.7)	208 (59.8)	226 (66.3)
Neutral (%)	28 (8.2)	3 (0.9)	23 (6.8)	3 (0.9)	–	–
Total	339	339	339	339	348	341

compared to 7-8% with a neutral Aact. Such discrepancy between Aact and BI seems to come from the fact that Aact is an evaluative(good-bad) measure while BI is a likelihood measure which seems to call for a more clear-cut response.

Table 2 also presents information about fertility outcomes. About 40% of couples became pregnant during the interval and about 60% did not become pregnant(based on outcome 1). Also about one-third of couples tried to become pregnant and about two-thirds did not try(based on outcome 2).

2. Prediction of Couple Behavior

In this section we will present results on the prediction of couple behavior. First, we will try to identify variables that moderate behavior prediction accuracy. Second, we will present several prediction models of couple behavior. More specifically, Fishbein's model will be tested on both behavioral intention(BI) and behavior. We will also compare the behavior prediction accuracy of the husband's and wife's responses.

For the first analysis a measure was devised, called "Index of Predictive Accuracy(IPA)", and assigned to each respondent. The IPA was determined by the correspondence between each individual's Aact(or BI) on having another child during the next 20 months and the actual behavioral outcomes. By devising IPA and employing it in correlational analyses we could utilize a 7-point range of predictive accuracy as an independent variable rather than just a dichotomous classification of hit or miss. If the behavioral outcome turned out to be positive(having tried to have a baby) each individual's Aact(or BI) itself becomes the IPA score(IPA=Aact or BI). On the other hand, if the behavioral outcome was negative(not having tried to have a baby) the IPA score is computed by transforming the Aact(or BI) score in such way that Aact(or BI) of 7 becomes an IPA of 1, 6 becomes 2, ⋯, and 1 becomes 7(; IPA=8−Aact or BI). In both cases then a high score(7) indicates maximal predictive accuracy and a low score(1) inidcates minimal predictive accuracy. This procedure is expressed asfollows :

When Aact(or BI)=1 2 3 4 5 6 7
if+Outcome ; IPA=1 2 3 4 5 6 7
if−Outcome ; IPA=7 6 5 4 3 2 1

Behavior Prediction and Relevant Variables

This section will investigate variables that moderate behavior prediction. We will first focus on directional bias and actual couple agreement. In addition to these two effects, we will also discuss the effect of demographic and relationship variables on attitude-behavior consistency.

Directional bias and behavior prediction

Beach & Christensen-Szalanski(1980) and Davidson & Beach(1981) have argued that predictions of deviation from the "status quo" tend to result in a higher proportion of prediction errors than predictions of nondeviation from the "status quo". Such directional bias tendency is apparent in the present sample as seen in Tables 3 and 4. When a husband had a negative Aact his hit rate(i.e., % of negative outcome) was 92.5% while a positive Aact led to the hit rate(% of positive outcome) of just 62.8%. Also wife's negative Aact-hit rate was 95.4% compared to her positive Aact-hit rate of 62.6%. The same thing was true with BI. While husband's negative BI-hit rate was 92.9%, his positive BI-hit rate was just 66.0%. For the wife the negative BI-hit rate was 95.6% compared to the positive hit rate of 68.8%. If one or both of spouses had neutral attitudes the outcome was predominantly negative(100% negative outcome when either husband or both spouses had a neutral Aact or BI, 78.3% negative outcome when wife had a neutral Aact, and 100% negative outcome

TABLE 3

Couple's Fertility Attitudes and Behavioral Outcomes

		Husband's Aact			
		+	0	—	Total
Wife's Aact	+	93 (73.2%) / 34 (26.8%)	0 (0.0) / 7 (100.0)	9 (31.0) / 20 (69.0)	102 (62.6) / 61 (37.4)
	0	4 (44.4%) / 5 (55.6%)	0 (0.0) / 3 (100.0)	1 (9.1) / 10 (90.9)	5 (21.7) / 18 (78.3)
	—	6 (21.4%) / 22 (78.6%)	0 (0.0) / 18 (100.0)	1 (0.9) / 106 (99.1)	7 (4.6) / 146 (95.4)
	Total	103 (62.8%) / 61 (37.2%)	0 (0.0) / 28 (100.0)	11 (7.5) / 136 (92.5)	114 (33.6) / 225 (66.4)

Note: ( ) = positive birth outcome
( ) = negative birth outcome

TABLE 4

Couple's Fertility Intentions and Behavioral Outcomes

		Husband's BI			
		+	0	−	Total
Wife's BI	+	96 (72.7%) / 36 (27.3%)	0 (0.0) / 1 (100.0)	10 (47.6) / 11 (52.4)	106 (68.8) / 48 (31.2)
	0	0 (0.0%) / 1 (100.0%)	0 (−) / 0 (−)	0 (0.0) / 2 (100.0)	0 (0.0) / 3 (100.0)
	−	5 (25.0%) / 15 (75.5%)	0 (0.0) / 2 (100.0)	3 (1.9) / 157 (98.1)	8 (4.4) / 174 (95.6)
	Total	101 (66.0%) / 52 (34.0%)	0 (0.0) / 3 (100.0)	13 (7.1) / 170 (92.9)	114 (33.6) / 225 (66.4)

Note : ( ) = positive birth outcome
( ) = negative birth outcome

when she had a neutral BI). Also of the total of 339 couples 225 couples(66.4%) had a negative outcome compared to 114 couples(33.6%) with a positive outcome.

In sum, the present study confirmed the directional bias hypothesis of attitude-behavior consistency.

Couple agreement and behavior prediction

We divided the sample into two groups-an agreeing group and a disagreeing group. The agreeing group included all the couples who had the same directions of Aact(or BI). The disagreeing group naturally included those couples who had the opposite directions of Aact(or BI) between the husband and wife. If either or both of spouses had a neutral Aact(or BI), those couples were excluded from the analysis.

As seen in Table 5, the results showed a singificant difference in predictive accuracy between the two groups. While over 80%(85.0% from Aact and 86.6% from BI) of the agreeing couples correctly predicted the outcome behavior, the prediction from the disagreeing couple's reports cause problems because one of the spouses is going to be wrong. When disagreement occurred, wives did better than husbands ; 54.4%(from Aact) and 61.0%(from BI) of wives hit the outcome behavior while only 45.6%(from Aact) and 39.0%(from BI) of hus-

TABLE 5

Behavior Prediction Accuracy

of Agreeing Couples and Disagreeing Couples

Group	Respondent	Prediction from Aact		Predicction from Aact	
		Hit (%)	Miss (%)	Hit (%)	Miss (%)
Agreeing couple	Husband=Wife	199 (85.0)	35 (15.0)	253 (89.6)	39 (13.4)
Disagreeing	Husband	26 (45.6)	31 (54.4)	16 (39.0)	25 (61.0)
couple	Wife	31 (54.4)	26 (45.6)	26 (61.0)	16 (39.0)

bands predicted the behavior correctly. Therefore, it is apparent that while the prediction of couple behavior based upon the reports of agreeing couples tends to be quite accurate, it can be risky to make a prediction when the husband's and wife's reports are contradictory with each other. However, the present study suggests that when disagreement occurred between the husband and wife, (1) a spouse with a negative attitude(Aact or BI) is more likely to win(.74 vs. .26 for Aact and .63 vs. .37 for BI), (2) a wife is more likely to win(.54 vs. 46 for Aact and .61 vs. .39 for BI), and (3) when a wife has a positive attitude and her husband has a negative attitude the husband is more likely to win(.69 vs. .31 for Aact and .52 vs. .48 for BI) though to a less degree than when their attitudes are reversed(a wife with a negative attitude won over her husband with a positive attitude in the ratio of .79 vs. .21 for Aact and .75 vs. .25 for BI). Hence, it seems that the attitude of the respondent is slightly more important than the sex of the respondent.

Demographic variables and behavior prediction

Table 6 shows the correlations of demographic variables with behavior prediction accuracy(IPA) of husbands and wives.

From the Table the following observations can be made : (1) Age, marriage duration and number of children emerged as three important demographic variables that moderate the accuracy of predicting a child-bearing behavior. The older the husband(the wife) was, the longer their marriage duration was and the more children they already had in their household, the more accurate his(her) prediction of the behavior was. (2) Some variables did not moderate

TABLE 6

Correlations of Demographic Variables
with Behavior Prediction Accuracy

Demographic Variables	Husband		Wife	
	IPA (Aact)	IPA (BI)	IPA (Aact)	IPA (BI)
Respondent's rural-urban background	−108*	−045	−058	−043
education	049	−065	−080	−003
religion	−100*	−001	−034	−002
gross monthly income of the employed	025	−022	−018ᵃ	−037ᵃ
age	190**	130**	157**	128**
Wife's employment	036	−029	100*	011
Combined gross monthly income	013	−012	−007	−012
Marriage duration	262**	113*	239**	160**
# of children	336**	082	359**	132**

Note : ᵃN = 123

IPA (Aact) = Index of Predictive Accuracy based on Aact-behavior consistency ;

IPA (BI) = Index of Predictive Accuracy based on BI-behavior consistency.

BI-behavior relationship but did moderate Aact-behavior relationship. They included husband's rural-urban background, husband's religion and wife's employment. Therefore, we probably can predict better from the Aacts of nonCatholic, rural background husbands and employed wives than from the Aacts of their counterparts. (3) The common assumption that people with a higher socio-economic status(SES) predict behavior better than those with a lower SES was not confirmed ; SES-related variables such as education and income were not singificantly correlated with behavior prediction accuracy.

From the earlier results it was apparent that behavior prediction accuracy was very much affected by the direction of attitudes(i.e., negative attitudes predicted behavior better than positive ones) and also that some variables(age, marriage duration and number of children) were highly correlated with a person's fertility attitudes. Therefore, these variables' strong correlations with behavior prediction accuracy might be accounted for largely by the interven-

tion of his(her) fertility attitudes. To test this argument we computed a partial correlation for each of demographic variables controlling attitudes(Aact or BI) form both the dependent variable(IPA) and the independent variables(demographic variabels). The results shown in Table 7 confirmed the argument. Only husband's age remained to be significantly correlated with behavior prediction accuracy.

In sum, age, marriage duration and number of children were important predictors of behavior prediction accuracy when the target behabior was a

TABLE 7

Partial Correlations of Demographic Variables
with Behavior Prediction Accuracy Controlling Aact or BI

Demographic Variables	Husband		Wife	
	IPA (Aact)	IPA (BI)	IPA (Aact)	IPA (BI)
Respondent' s				
rural-urban background	−044	005	−060	−042
education	019	−074	−007	037
religion	−012	032	013	032
gross monthly income of the employed	009	−037	024[a]	−011[a]
age	128**	092**	073	085
Wife' s employment	025	−055	043	−025
Combined gross monthly income	008	−011	−008	−005
Marriage duration	081	040	074	076
# of children	060	−054	074	−007

Note: [a]N = 123.

fertility behavior(child-bearing). When their relation with the target behavior was taken out by controlling attitudes toward the behavior, most of their effect on behavior prediction accuracy was eliminated.

Couple relationship variables and behavior prediction

From Table 8 two variables(communication and agreement) emerged as predictors of behavior prediction accuracy ; the more communication a couple

TABLE 8

Correlations of Relationship Variables
with Behavior Prediction Accuracy

Relationship Variables	Husband		Wife	
	IPA (Aact)	IPA (BI)	IPA (Aact)	IPA (BI)
Power in fertility decision-making	070	038	−140**	−014
Communication in fertility decision-making	−371**	−122*	−426**	−126**
Agreement in fertility decision-making	064	110*	111*	025
Marital satisfaction	−016	075	−028	123*

TABLE 9

Partial Correlations of Relationship Variables
with Behavior Prediction Accuracy Controlling Aact or BI

Relationship Variables	Husband		Wife	
	IPA (Aact)	IPA (BI)	IPA (Aact)	IPA (BI)
Power in fertility decision-making	−026	−009	053	021
Communication in fertility decision-making	−102*	024	−038	064
Agreement in fertility decision-making	298**	183**	182**	069
Marital satisfaction	022	074	112*	161**

had about having another child the less accurate their prediction of the behavior was, and the more a couple agreed on having another child the more accurate their prediction was. While the result with couple agreement was consistent with previous studies and also with the earlier findings of the

pre:ent study(refer to Table 5 and 6), the result with couple communication was surprising since communication was expected to increase behvior prediction accuracy.

In order to explain this unexpected result we again obtained partial correlations between IPA and relationship variables controlling Aact(or BI). From the results not presented here, some relationship variables(especially couple communication) were hignly correlated with fertility attitudes. The results in Table 9 showed that this was indeed the case : Strong negative correlations of communication with behavior prediction accuracy virtually disappeared by controlling Aact(or BI) except in the case of husband's IPA(Aact). Showing an opposite pattern, the relationship of agreement with behavior prediction accuracy became stronger and also, at least for wives, marital satisfaction became a significant predictor of behavior prediction accuracy.

In sum, the strong negative correlation of couple communication with behavior prediction accuracy was found to be mediated largely by its relationship with attitudes ; more communicating couples in general were those who had positive attitudes toward the target behavior and hence, were less accurate in their prediction of the behavior due to the directional bias tendency. When Aact(or BI) was controlled, the relation of communication with behavior prediction accuracy became weaker, and agreement and marital satisfaction emerged to be significantly related to behavior prediction accuracy.

Behavior Prediction Models
Test of Fishbein's model

Fisbeins's model was tested on behavioral intention and also on couple behavior.

Behavioral intention(BI) and Fishbein's model : As seen in Table 10 Fishbein's model predicted BI very well ; the multiple correlations(Rs) were close to .8 for both husbands and wives. The data in Table 10 also suggest that both of the components in Fishbein's model are necessary for the prediction of BI. For both husbands and wives the correlation coefficients of the two components with BI were all significant(all ps< .01). Also, the standardized regression coefficients of both components with BI were all significant(all ps

TABLE 10

Correlations, Regression Coefficients, and Multiple Correlations of SBE and SNB on BI

Respondent	Corr. Coeff.		Reg. Coeff.		R for BI
	SBE-BI	SNB-BI	SBE-BI	SNB-BI	
Husband	699	661	476	386	767
Wife	713	628	526	332	764

Note: All zero-order correlations, regression coefficients, and multiple correlations are significant (p < .01).

< .01). Though these two components were significantly correlated with each other(r=.572 for husbands and .565 for wives), they still contributed a substantial amount of independent variance to the prediction of BI, i.e., both components received significant regression weights in the prediction of BI.

As mentioned earlier, Fishbein's model dictates no direct influence of demographic variables upon the prediction of BI. To test this hypothesis, we added each of the demographic variables to the equation separately and examined how much R^2 increased by adding that variable. For example, in order to test the amount of contribution of the education variable we examined the regression equation ; BI=SBE+SNB+EDUCATION, and for the age variable ; BI=SBE+SNB+AGE, and so on.

The results seen in Table 11 showed that only number of children contributed significantly to the equation for both husbands and wives. Except for education of husbands, no other demographic variables contributed a significant amount of independent variance to the equation. Hence, the results in general supported Fishbein's argument.

We also tested whether relationship variables contributed independent variances to the BI equation. The same procedure was used as in the case of demographic variables except that we also added interactional terms this time. For example, for the power variable the regression equation was ; BI=SBE+ SNB+POWER+SBE×POWER+SNB×POWER. As seen in Table 12 three relationship variables(power for husband, communication and agreement for both spouses) turned out to have significant independent contributions to

TABLE 11

Increments in BI R² by the Addition of Demographic Components

Respondent	Demographic Variables								
	RU	Edu	Rel	Income	Age	Wempl	Cincome	Mardur	Nchild
Husband	000	006*	001	000	000	002	003	001	010**
Wife	001	002	004	014ᵃ	000	002	002	002	018**

Note : Abbreviations are as follows : RU = Rural-urban background; Edu = Education;
Rel = Religion; Income = Gross monthly income of the employed; Wempl = Wife's employment;
Cincome = Combined gross monthly income; Mardur = Marriage duration; Nchild = # of
children.
ᵃN = 123.

TABLE 12

Increments in BI R² by the Addition of Relationship Components

Res-pondent	Relationship Variables in Fertility Decision-Making									Marital satisfaction		
	Power			Communication			Agreement					
	PW	SBExPW	SNBxPW	CO	SBExCO	SNBxCO	AG	SBExAG	SNBxAG	MS	SBExMS	SNBxMS
Husband	013**	003	001	018**	007*	004	010**	001	001	002	002	001
Wife	003	001	003	037**	006*	007*	008*	000	000	001	000	000

Note: Abbreviations are as follows: PW = Power; CO = Communication; AG = Agreement;
MS = Martial satisfaction.

the equation. Among interactional terms only communication(interacting with
SBE and SNB) accounted for significant portions of variance in the equation.
While it might be unexpected for an individual's BI to be influenced by
relationship variables, it is not totally surprising considering that in the
present study BI concerns behavior that involves actions of both husband and
wife.

Behavior and Fishbein's model : As seen in Table 13 the model predicted
behavior rather well ; the multiple correlations(Rs) were close to .6 for both
husbands and wives. Also the two components in the equation were found to
have contributed substantial amount of independent variances to the
equation(all correlations and standardized regression coefficients of the two

TABLE 13

Correlations, Regression Coefficients.
and Multiple Correlations of SBE and SNB on Couple Behavior

Respondent	Corr. Coeff.		Reg. Coeff.		R for Be
	SBE-Be	SNB-Be	SBE-Be	SNB-Be	
Husband	520	515	335	322	583
Wife	515	523	322	340	586

Note: All zero-order correlations, regression coefficients, and multiple correlations
are significant $(p < .01)$.

components with behavior were significant at $p < .01$ level).

We also tested whether demographic variables and relationship variables
had independent contributions to the equation or contributed only through the
two components(the attitudinal component and the normative component;
SBE and SNB). Table 14 showed that among 9 demographic variables only
two variables(number of children and wife's employment) were found to
contribute significant portions of independent variance to the behavior equa-
tion. And as seen in Table 15, among relationship variables communication
was the only variable that contributed significant portions of independent
variance to the equation in the form of either main effect or interaction(with
SBE) effect.

TABLE 14

Increments in Behavior R^2 by the Addition of Demographic Components

Respondent	Demographic Variables								
	RU	Edu	Rel	Income	Age	Wempl	Cincome	Mardur	Nchild
Husband	005	000	003	000	000	013*	001	001	016**
Wife	000	001	001	004[a]	001	007	000	003	025**

Note : Abbreviations are as follows : RU=Rural-urban background; Edu=Education;
Rel=Religion; Income=Gross monthly income of the employed; Wempl=Wife's employment;
Cincome=Combined gross monthly income; Mardur=Marriage duration;
Nchild=# of children.
[a]N=123.

TABLE 15

Increments in Behavior R² by the Addition of Relationship Components

Re- spondent	Relationship Variables in Fertility Decision-Making										Marital satisfaction		
	Power			Communication			Agreement						
	PW	SBExPW	SNBxPW	CO	SBExCO	SNBxCO	AG	SBExAG	SNBxAG	MS	SBExMS	SNBxMS
Husband	000	002	001	034**	016**	000	002	001	003	002	006	004
Wife	004	001	002	055**	013**	000	003	000	000	000	000	003

Note : Abbreviations are as follows : PW=Power ; CO=Communication ; AG=Agreement ;
MS =Marital satisfaction.

Sources of attitudes and behavior prediction

As mentioned earlier there has been much controversy in the family survey area over whether an interviewer should obtain attitudinal responses from the husband, from the wife, or from both spouses. The best way to resolve this controversy will be to judge each model on its ability to predict behavior.

As seen in Table 16, the comparison between the husband model and the wife model showed wife's superiority over husband in the prediction of couple behavior ; measures from wives were consistently more highly correlated with couple behavior than those from husbands, though all the correlations were significant($p<$ .01) for both spouses. When measures were included from both

TABLE 16

Multiple Correlations of Prediction Measures
from Different Sources on Couple Behavior

Prediction Measures	Multiple Correlations (Rs)			R² Change by Adding	
	One Spouse		Both Spouses	Wife to	Husband to
	Husband	Wife	(Husband+Wife)	Husband	Wife
Fishbein's Model (SBE + SNB)	583	586	637	066	062
Aact	607	634	681	095	062
BI	654	693	709	075	022

Note : All multiple correlations and R² changes are significant ($p<$.01).

spouses(couple model) instead of just one spouse(individual model), there was a substantial improvement upon the prediction of couple behavior(R^2 increments by adding spousal components to the regression equation were significant at $p <$ .01 level for all three prediction measures). Adding the wife component produced more improvement than adding the husband component since, as already seen, wife's attitudes(intentions) accounted for more variance in couple behavior than husband's. Also, it should be noted that among three prediction measures BI was the most accurate in predicting behavior. This finding seemed to be consistent with Fishbein's claim that BI is the immediate determinant of behavior itself.

DISCUSSION

What mechanisms or variables moderate behavior prediction?

Two mechanisms were found to have influence on behavior prediction accuracy in the present study. One was directional bias and the other was actual couple agreement. When couples were predicted to decide not to have another child, predictive accuracy was high(about 95%), but when they were predicted to decide to have another child, predictive accuracy was significantly lower(about 65%). The present result was consistent with Davidson & Beach's(1981) finding that "predictions of deviation from the status quo resulted in a higher proporton of prediction errors than predictions of nondeviation from the status quo"(p.475).

When a husband's and wife's attitudes toward having another child were in the same direction, predictive accuracy was high(about 85%), but when their attitudes were in the opposite direction predictive accuracy dropped significantly(about 60% from wives' attitudes and about 40% from husbands'). When disagreement occurred, (1) spouses with negative attitudes were more likely to win, (2) wives were more likely to win and (3) the direction of attitude was slightly more important than the sex of the respondent.

Among variables examined in the present study three demographic variables(age, marriage duration and number of children) and two couple relationship variables(communication and agreement) emerged as strong predictors of predictive accuracy for couple's fertility decision. A person's SES(income and education) or spousal power was not correlated with his(her) behavior prediction accuracy. Of those significant predictors four were posi-

tive predictors(older age, longer marriage duration, larger number of children in the household and higher couple agreement led to more accurate behavior prediction) and one was negative(more frequent couple communication led to less accurate behavior prediction). Some of these correlations were unexpected, especially the correlation with communication. How could more communicating couples be less accurate in their prediction of the decision than less communicating ones?

To explain these unexpected findings we computed partial correlations between these predictor variables and behavior prediction accuracy controlling Aact(or BI) from both sides. This procedure was prompted by the earlier findings that many demographic and relationship variables were highly correlated with fertility attitudes, and in turn couple's attitudes were highly correlated with behavior prediction accuracy(i.e., directional bias tendency).

When partial correlations were computed only husband's age, couple agreement and marital satisfaction emerged as significant predictors of behavior prediction accuracy, indicating most significant correlations were in fact mediated by couple's fertility attitudes. The result reveals that there are three types of variables that moderate couple's behavior prediction accuracy :

(1) Attitudinal content related variables : Some variables moderate behavior prediction accuracy because they are highly correlated with the content or target behavior. For example, in the present study age, marriage duration and number of children were strong moderating variables because all of them were highly correlated with the fertility decision. Couples with older age, longer marriage duration and more children were more likely to have negative attitudes toward having another child, and following the directional bias tendency, their negative attitudes led to more accurate behavior prediction. Another example of the content-related variables is the fecundity of one or both of spouses. Prediction from a husband's negative attitude toward having a child is bound to be more accurate when his wife is not capable of getting pregnant than when she is capable.

(2) Attitudinal direction related variables : Some variables moderate behavior prediction accuracy because they are highly correlated with the direction of attitudes. For example, in the present study less frequent communication on fertility decision led to more accurate prediction of the decision because couples with negative attitudes tended to discuss the subject less frequently.

Though many content-related variables moderate behavior prediction accuracy through directional bias mechanism like variables mentioned here, the latter should be distinguished because they are not content-related but only direction-related.

(3) General moderator variables : Some variables moderate behavior prediction accuracy without relation to attitudinal content or attitudinal direction. In the present study couple agreement and marital satisfaction were significantly related with behavior prediction accuracy when partial correlations were obtained taking out the contribution of attitudes from the correlations. In this case attitudes served as nuisance variables rather than as contributors.

Test of Fishbein's model on both behavioral intention(BI) and behavior proved that both SBE(attitudinal component) and SNB(normative component) are valid components in the model. Also Fishbein's argument that the effects of demographic variables can be sufficiently mediated by the attitudinal and normative components was generally supported in the present study. Only number of children contributed a significant independent variance to the regression equation of both BI and behavior. Among relationship variables, communication(both as a main effect and as an interaction effect with SBE) was significant on both BI and behavior, and agreement(as a main effect only) was significant on BI only. It should be recalled that in the present study the target behavior was fertility behavior(having another child) that required both spouses' cooperation. Though SNB component was supposed to mediate spousal influence, couple-decision specific variables(communication and agreement) still contributed independent variances, suggesting that for the prediction of couple behavior we should consider couple relationship variables in the model.

As mentioned earlier the present analysis showed almost parallel results between BI and behavior. The only notable difference was that the SNB component became more important(especially for wives) in the behavior equation than in the BI equation. It can be explained by the fact that in the BI equation BI was an individual's BI while in the behavior equation behavior was a couple behavior.

Who predicts couple behavior more accurately? The present study indicated that for all of the prediction measures(Fishbein's model, Aact, and BI) wife's report(wife model) led to a better prediction than husband's(husband model).

Also taking into account both spouses' reports(couple model) led to a significant improvement upon behavior prediction compared to relying on just one spouse's report(individual model). The wife model's superiority in predictive accuracy was consistent with several past studies(Townes, et al., 1977 ; Fried, et al., 1980). Also these researchers have found that husband's contribution, when added to the wife model, was generally redundant. In the present study adding the husband component to the wife model still produced a significant improvement though it was smaller than when adding the wife component to the husband model. Whether the amount of improvement could justify the extra time, money and inconvenience for surveying both spouses is a matter of practical concern.

Once again it should be pointed out that in the present study we are dealing with a fertility behavior(having another child) rather than couple behavior in general. Wife's superior ability in behavior prediction could be traced to her superior power in fertility decision-making which impacts the wife more than the husband. Hence, a spouse's relative behavior prediction accuracy might depend on the relevancy of the decision topic to the spouse. Also there is evidence that the relative predictive accuracy of the husband and the wife depends on the given culture. For example, in Fried & Udry's study(1979) black husbands predicted fertility behavior better than or at least as well as their wives while for whites wives were better than husbands. Therefore, in order to fully explore this question one should sample a variety of different decision topics and compare the findings among different cultural groups.

REFERENCES

Ajzen, I., & Fishbein, M.(1973). Attitudinal and normative variables as predictors of specific behaviors. *Journal of Personality and Social Psychology*, *27*, 41-57.

Ajzen, I., & Fishbein, M.(1977). Attitude-behavior relations : A theoretical analysis and review of empirical research. *Psychological Bulletin*, *84*, 888-919.

Beach, L. R., Campbell, F. L., & Townes, B. D.(1979). Subjective expected utility and the prediction of birth-planning decisions. *Organizational Behavior and Human Performance*, *24*, 18-28.

Beach, L. R., & Christensen-Szalanski, J.(1980). Development and evaluation

of a multi-attribute utility scheme for career change decisions. Unpublished paper, University of Washington, Seattle, WA.

Beach, L. R., Townes, B. D., Campbell, F. L., & Keating, G. W.(1976). Developing and testing a decision aid for birth planning decisions. *Organizational Behavior and Human Performance, 15,* 99-116.

Bem, D. J., & Funder, D. C.(1978). Predicting more of the people more of the time : Assessing the persnality of situations. *Psychological Review, 85,* 485-501.

Coombs, L. C., & Chang, M.(1981). Do husbands and wives agree? Fertility attitudes and later behavior. *Population and Environment, 4,* 109-127.

Davidson, A. R., & Beach, L. R.(1981). Error patterns in the predictions of fertility behavior. *Journal of Applied Psychology, 11,* 475-488.

Davidson, A. R., & Jaccard, J. J.(1975). Popullation Psychology : a new look at an old problem. *Journal of Personality and Social Psychology, 31,* 1073-1082.

Davidson, A. R., & Jaccard, J. J.(1979). Variables that moderate the attitude-behavior relations : Results of a longitudinal survey. *Journal of Personality and Social Psychology, 37,* 1364-1376.

Edwards, A. L.(1957). *Techniques of attitude scale construction.* New York : Appleton-Century-Crofts.

Fazio, R., & Zanna, M.(1978). Attitudinal qualities relating to the strength of the attitude-behavior relationship. *Journal of Experimental Social Psychology, 14,* 398-408.

Fazio, R., Zanna, M., & Cooper, J.(1978). Direct experience and attitude-behavior consistency : An information processing analysis. *Personality and Social Psychology Bulletin, 4,* 48-51.

Fishbein, M.(1967). Attitude and the prediction of behavior. In M. Fishbein(Ed.), *Readings in attitude theory and measurement.* New York : Wiley.

Fishbein, M., & Ajzen, I.(1974). Attitudes toward objects as predictors of single and multiple behavioral criteria. *Psychological Review, 81,* 59-74.

Fishbein, M., & Azjen, I.(1975). *Beliefs, attitudes, intention and behavior.* Readings, Mass. : Adison-Wesley.

Fishbein, M., & Jaccard, J. J.(1973). Theoretical and methodological considerations in the prediction of family intentions and behavior. *Representative Research in Social Psychology, 4,* 37-51.

Fried, E. S., Hofferth, S. L., & Udry, J. R.(1980). Parity-specific and two-sexs

utility models of reproductive intentions. *Demograpy, 17,* 1-11.

Fried, E. S., & Udry, J. R.(1979). Wives' and husbands' expected costs and benefits of childbearing as predictors of pregnancy. *Social Biology, 26,* 265-274.

Fried, E. S., & Udry, J. R.(1980). Normative pressures on fertility planning. *Population and Environment, 3,* 199-209.

Gillig, P. M., & Greenwald, A. G.(1974). Is it time to lay the sleeper effect to rest? *Journal of Personality and Social Psychology, 29,* 132-139.

Hovland, C. I., & Weiss, W.(1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly, 15,* 635-650.

Jaccard, J. J., & Davidson, A. R.(1976). The relation of psychological, social, and economic variables to fertility-related decisions. *Demography, 13,* 329-338.

Kelley, S., & Mirer, T. W.(1974). The simple act of voting. American *Political Science Review, 68,* 572-591.

Min, K. H.(1980). A cross-cultural test of the Fishbein model of behavioral intentions. Unpublished master's thesis. University of Washington, Seattle, WA.

Mischel, W.(1968). *Personality and assessment.* New York : Wiley.

Schuman, H., & Johnson, M. P.(1976). Attitude and behavior. *Annual Review of Sociology, 2,* 161-207.

Schwartz, s.(1973). Normative explanations of helping behavior : *Journal of Experimental Social Psychology, 9,* 349-364.

Schwartz, S.(1978). Temporal instability as a moderator of the attitude-behavior relationship. *Journal of Personality and Social Psychology, 36,* 715-724.

Snyder, M., & Tanke, E. D.(1976). Behavior and attitude : Some people are more consistent than others. *Journal of Personality,* 44, 501-517.

Townes, B. D., Beach, L. R., Campbell, F. L., & Martin, D. C.(1977). Birth planning values and decisions : The prediction of fertility. *Journal of Applied Social Psychology, 7,* 73-88.

Vinokur-Kaplan, D.(1978). To have-or not to have-another child : Family planning attitude, intentions, and behavior. *Journal of Applied Social Psychology, 8,* 29-46.

Wicker, A. W.(1969). Attitudes versus actions : The relationship of verbal and overt behavioral responses to attitude objects. *Journal of Social Issues, 25,* 41-78.

〈요약〉

夫婦行動의 豫言에 關한 一研究

閔 庚 煥

서울大學校 心理學科

　　본 연구에서는 출산행동을 소재로 부부행동의 예언에 관여하는 변인들을 조사하였다. 연구설계는 2단계, 1년간의 종단적 설문조사 연구로서 적어도 한 명의 자녀를 지닌 부부 349쌍을 대상으로, 첫번째 면접에서 앞으로 20개월 동안 아이를 갖는 것에 관한 신념과 태도를 조사하고 1년후의 재면접에서 실제행동을 확인하였다.

　　본 연구의 결과, 부부행동의 예언을 중재하는 변인들은 개념상 (i) 태도내용에 관련된 변인들 (ii) 태도방향에 관련된 변인들 및 (iii) 일반 중재변인들의 셋으로 분류될 수 있으며 이들은 각기 상이한 기제를 통하여 예언의 정확성에 영향을 미침이 밝혀졌다. 더불어 부부행동의 예언 모델로서 Fishbein의 행동의사 모델의 타당성이 검토되었고 개인모델(아내 혹은 남편)과 부부모델간에 예언의 정확성이 비교되었다.