The Theory of Reasoned Action Applied to Coupon Usage

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This application of the theory of reasoned action examines the standard Fishbein–Ajzen paradigm and several model variations. These variations extend and challenge the standard model by incorporating tests of interdependent relations between attitudinal and subjective influence variables, by postulating multiple cognitive and normative structures rather than unidimensional structures, and by comparing direct effects of *Aact* and *SN* on behavior against indirect effects mediated through behavioral intentions.

Coupon usage is an aspect of consumer and marketer behavior that has experienced near phenomenal growth, with total coupon distribution in 1982 estimated at $119.5 billion (*Marketing Communications* 1983). The important role of coupons and other forms of dealing has prompted researchers to examine characteristics of the "deal-prone" consumer, to investigate the impact of deals on consumer choice and brand switching, and to study the influence of deals on overall product sales and market shares (e.g., Blattberg et al. 1978; Cotton and Babb 1978; Dodson, Tybout, and Sternthal 1978; Massy and Frank 1965; Montgomery 1971; Schiffman and Nieverth 1974; Shoemaker and Shoaf 1977; Webster 1965).[1]

Research generally reflects a decided marketer orientation by focusing on ways to enable companies to stimulate consumer response. This is, of course, an important issue, but surprisingly little research has examined dealing behavior from the consumer's perspective to understand the behavior for its own sake. Consumers' coupon usage behavior is basically an unexplored area that represents the focus of the present inquiry. Such behavior may appear trivial in comparison to what often is studied by consumer researchers. The fact remains, however, that coupon use represents significant expenditures of time and effort and provides savings to millions of consumers.[2]

CONCEPTUAL FRAMEWORK

Our guiding research premise is that coupon usage is rational, systematic, and thoughtful behavior rather than capricious or primarily under the control of unconscious motives. The theory of reasoned action (Ajzen and Fishbein 1980) provides a suitable framework for conceptualizing such behavior. According to this perspective, consumers' intentions to use coupons are determined by their attitudes and perceptions of whether important others (e.g., spouse) think one should or should not expend the effort to clip, save, and use coupons. Behavior is in turn determined by intentions.

Modeling Coupon Usage

This research, though another in a continuous stream of applications of the theory of reasoned action, also provides an opportunity to examine alternative modeling specifications which have appeared recently in consumer behavior and cognate literatures (Bagozzi 1981, 1982; Bentler and Speckart 1979, 1981; Burnkrant and Page 1982; Miniard and Cohen 1979, 1981; Ryan 1982). Results from these studies, while offering

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[1] The terms "deals" and "dealing" include but are not limited to coupon activity. Dealing encompasses various sales promotion activities such as cents-off deals, trading stamps, and coupons. Most of the dealing literature already noted has not dealt with coupon use per se; nevertheless, it is reasonable to assume some similarity in consumers' behavior from one dealing mechanism to another.

[2] Over 75 percent of all U.S. households in 1980 were coupon users (Aycrigg 1981); direct savings to consumers in the form of lower prices exceeded $500 million (Strang 1981).

additional partial support for the theory of reasoned action, deviate sufficiently from theory predictions to warrant additional research.

An application of the theory and its variants to coupon usage offers an interesting alternative to the types of behaviors studied in other recent tests. These behaviors include relatively uninvolving and somewhat referent-free decision making in the case of Ryan's (1982) study of toothpaste; involving, altruistic behavior in Bagozzi's (1981, 1982) and Burnkrant and Page's (1982) studies of blood donating; and involving, referent-based behavior in Bentler and Speckart's (1981) study of exercise, studying, and dating behaviors as well as in Miniard and Cohen's (1979, 1981) hypothetical purchase of a clothing item.

Coupon usage behavior is comparatively paradoxical: in certain respects, it is the most trivial and mundane of behaviors, yet for some consumers it represents a highly time-consuming and involving activity. However, what most distinguishes coupon usage from more typical "Fishbein-tested behaviors" is the heavy pecuniary rationale motivating coupon usage, in contrast to the nonpecuniary consequences that underlie blood donating, dating, exercising, and the other behaviors just mentioned.

The alternative models of coupon usage behavior tested in our research include the standard Fishbein–Ajzen paradigm as well as competing models that both challenge and extend the standard framework.

Model 1. Figure A represents the conventional Fishbein–Ajzen model of reasoned action, the currency of which removes the need here for another detailed explanation. In its application to coupon use, the model suggests that this behavior is directly influenced by intentions that result, in turn, from an affective-based attitude, *Aact*, and from internalized referent influences or subjective norms, *SN*. *Aact* and *SN* are postulated as the outcomes of cognitive and normative structures, respectively, where $\Sigma b_i e_i$ is a unidimensional representation of aggregated personal beliefs about the consequences of coupon usage and their corresponding evaluations, and ΣNB_jMC_j is a parallel unidimensional representation of normative beliefs and the associated motivations to comply with important others' expectations regarding coupon usage.

Several points are noteworthy prior to offering competing models. First, the standard model (Figure A) assumes that attitude can be separated into cognitive and affective components and that the latter results from the former. A second assumption is that cognitive structure is systematic, organized, and connected, and that it can be represented as a unidimensional construct, $\Sigma b_i e_i$. Third and fourth assumptions are that a global normative construct, *SN*, results from normative structure elements, normative beliefs, and corresponding motivations to comply, and that these elements are also organized, connected, and represent a unidimensional construct, ΣNB_jMC_j. Fifth, attitudinal and normative factors are assumed to be independent of one another; a sixth assumption is that attitudinal and normative effects on behavior are entirely indirect, as mediated through behavioral intentions.

The questionable suitability of these assumptions has prompted a series of recent conceptual and empirical challenges to the theory. Justification for the following alternative models of coupon usage behavior arises from these studies, with relevant literature cited where appropriate.

Model 2. This model, illustrated in Figure B, portrays cognitive structure to consist of multiple expectancy-value components, $EV1$ to $EV3$, in contrast to the unidimensional construct, $\Sigma b_i e_i$, which is assumed in the theory of reasoned action. Justification for this alternative modeling extends from prior research (Bagozzi 1981, 1982) and is logically based in the view that cognitive elements regarding the consequences of a particular behavior may reasonably be expected to be qualitatively different, variable in significance, and, in general, not organized psychologically into a singular schema, script, category, or other cognitive unit.

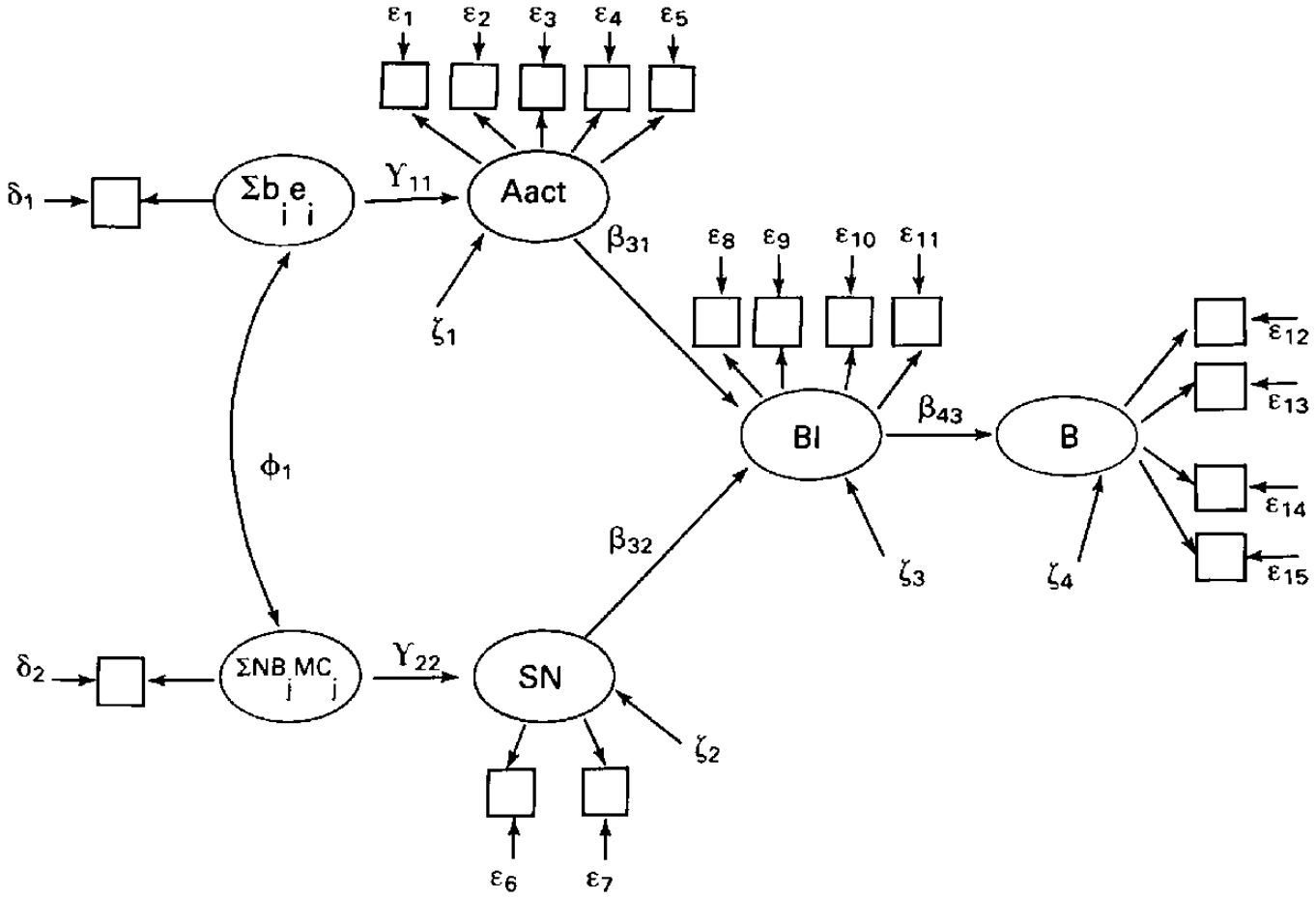
In similar fashion, Model 2 proposes a multidimensional normative structure, NB_1MC_1 to NB_3MC_3, as an alternative to Fishbein–Ajzen's unidimensional representation. The rationale is that internalizations of important others' views may vary greatly in significance and meaning and not be organized systematically into a single, coherent cognitive unit. Research by Ryan and Bonfield (1980) offers empirical support for this multidimensional representation. Their principal components analysis of four referents identified "family" and "non-family" referents as distinct factors. Furthermore, Warshaw (1980) presents a convincing argument in claiming that referent influences probably are not homogeneous.

Additional Model Variations. Several variations on the Fishbein–Ajzen theory in addition to Model 2 are suitably tested in the context of coupon usage behavior. Miniard and Cohen's (1979, 1981) demonstration that attitudinal and normative constructs are inseparable, Fishbein and Ajzen's (1975) notion of inferential beliefs, and Ryan's (1982) showing that cognitive and normative constructs are linked all justify the present effort's further assessment of "crossover" relationships between personal and normative elements. Two types of crossover effects are tested: (1) those between cognitive structure and subjective norms and between normative structure and *Aact*, and (2) direct linkages between subjective norms and *Aact*.

Rationale for the first type of crossover extends directly from Fishbein and Ajzen's (1975) own writings, which Ryan (1982, pp. 264–265) has lucidly detailed. Applied specifically to coupon usage, it stands to reason that (1) a coupon user's personal beliefs

FIGURE A

MODEL 1 AND ITS VARIANTS[a]



Extensions	Model variants[b] 1a	1b	1c
$\Sigma b_i e_i$ — *SN* (γ_{21})	✓	—	—
$\Sigma NB_j MC_j$ — *Aact* (γ_{12})	✓	—	—
Aact — *SN* (β_{21})	—	✓	✓
SN — *Aact* (β_{12})	—	✓	✓
Aact — Behavior (β_{41})	—	—	✓
SN — Behavior (β_{42})	—	—	✓

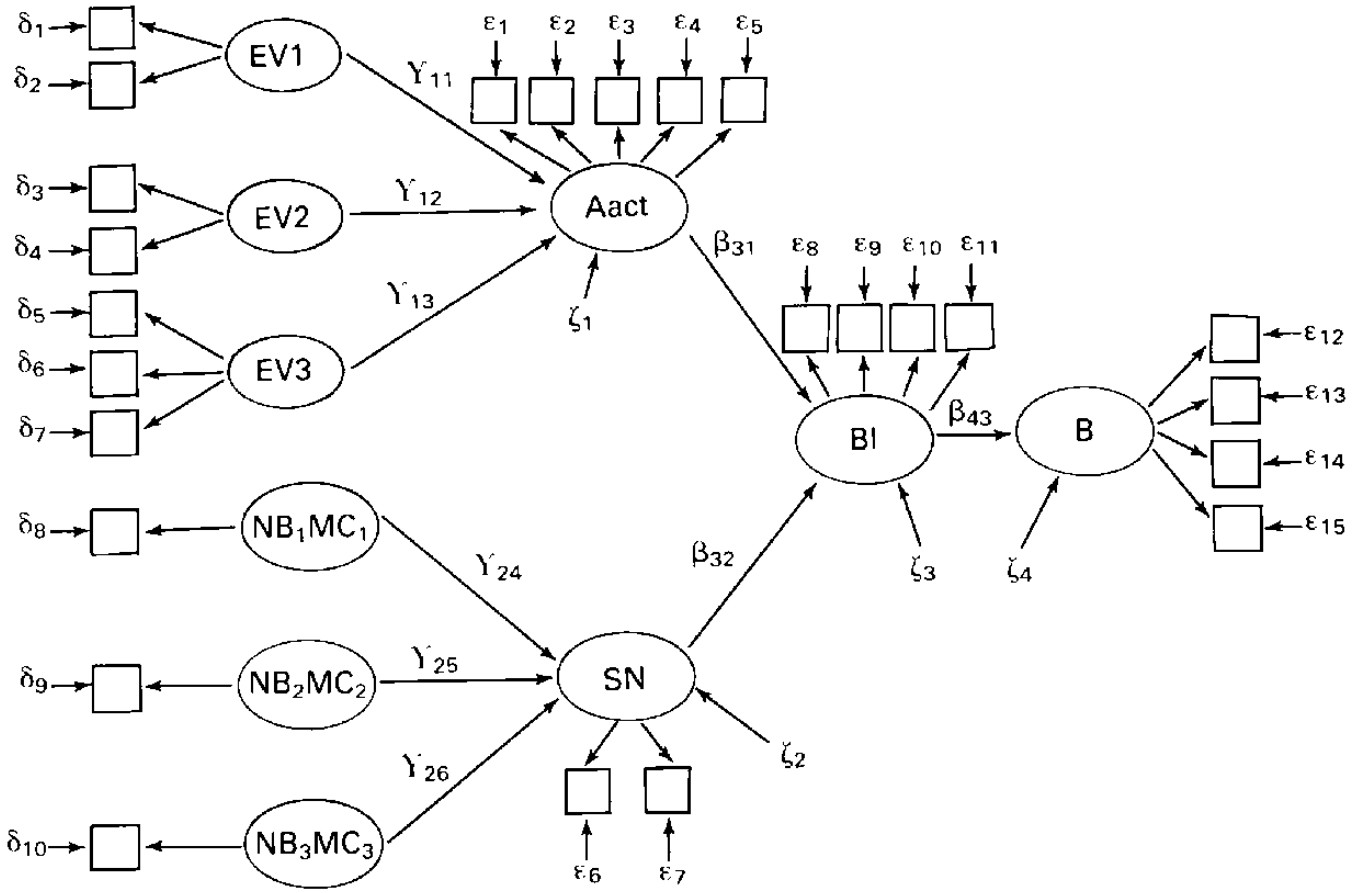
[a] Latent constructs are shown as ellipses, whereas indicators are symbolized by boxes. Refer to text for discussion of specific indicators.
[b] "✓" signifies the presence of a model extension; "—" its absence.

provide a basis for inferring what others' thoughts are about his/her couponing activity, and (2) his/her normative beliefs supplement personal beliefs in formulating personal attitudes toward coupon usage. The psychological operation in the first case may be something such as "because I think my coupon use behavior is worthwhile, others probably share this belief." Ross (1977) offers a formal account in his notion of "false consensus," which describes the tendency to see one's own behavioral choices and judgments as common and appropriate and to bias estimates of what is normal (or deviant) in accord with these personal judgments and choices. In the second case, the expectation is that because coupon use is a form of behavior that has direct consequences for important others (especially one's spouse), the consumer will utilize others' opinions in addition to his/her personal beliefs when forming attitudes toward the behavior.

A second form of crossover hypothesizes direct, bicausal effects between *Aact* and subjective norms. In addition to the foregoing arguments, the rationale is that *Aact* and *SN* represent cognitive outcomes that are logically linked in memory and, accordingly, should exert direct influence on each other.

FIGURE B

MODEL 2 AND ITS VARIANTS[a]



Extensions	Model variants[b] 2a	2b	2c
EV1 → *SN* (γ_{21})	✓	—	—
EV2 → *SN* (γ_{22})	✓	—	—
EV3 → *SN* (γ_{23})	✓	—	—
NB_1MC_1 → *Aact* (γ_{14})	✓	—	—
NB_2MC_2 → *Aact* (γ_{15})	✓	—	—
NB_3MC_3 → *Aact* (γ_{16})	✓	—	—
Aact → *SN* (β_{21})	—	✓	✓
SN → *Aact* (β_{12})	—	✓	✓
Aact → Behavior (β_{41})	—	—	✓
SN → Behavior (β_{42})	—	—	✓

[a] Latent constructs are shown as ellipses, whereas indicators are symbolized by boxes. Refer to text for discussion of specific indicators. Model 2 and its variants estimated all correlations between exogeneous constructs ($\phi_{11}, \ldots, \phi_{16}$), but for clarity's sake, the paths are excluded from the figure.

[b] "✓" signifies the presence of a model extension; "—" its absence.

A third modeling extension involves the issue of precisely how *Aact* and *SN* affect behavior. The theory of reasoned action postulates that these effects are entirely mediated through behavioral intentions, but this presumption has been challenged by Bentler and Speckart's (1981) finding that attitudes influence behavior directly as well as indirectly through intentions. The fact that Bagozzi (1981) found that attitude influenced behavior only through its impact on intentions indicates that the issue is unsettled and in need of further research. The present study examines both the direct effects of *Aact* and *SN* on behavior and their mediated effects.

Testing Program

A total of eight models were examined—two primary models (Models 1 and 2) with three variants each. In concert with other recent examinations of Fishbein–Ajzen theory (Bagozzi 1981, 1982; Bentler and Speck-

art 1979, 1981; Burnkrant and Page 1982; Loken 1983; Ryan 1982), this study employs a structural equation approach; the advantages of doing so have been explicated elsewhere (Bagozzi 1981, 1982; Bentler and Speckart 1979; Ryan 1982). Correlation coefficients were input into LISREL VI (Jöreskog and Sörbom 1983) to test the various models.[3]

METHODS

Data Collection

Data were collected in two waves from a two-state consumer panel whose members reflect a somewhat upscale (median family income = $25–30,000), white (93 percent), and older (average age = 49) profile.[4] The first wave obtained measures for all of the nonbehavioral variables. Self-reported coupon usage behavior was measured at the second wave, which followed the first by one full month. The two waves were separated so that self-reported behavior would be less likely to contaminate—or be contaminated by—responses to the other measures.

The selection of questionnaire items for the panel and field studies was based upon responses from a small (n = 17) convenience sample of shoppers who were asked to list the advantages and disadvantages (to them personally) of using coupons and to identify the referents who might influence their coupon use. In combination with informal interviews with coupon exchange club members, this elicitation procedure identified three couponing-relevant referents: spouse, family members other than spouse, and friends/neighbors. Seven salient consequences of coupon usage were also identified: (1) time and effort required to clip coupons; (2) time and effort required to redeem them; (3) monetary savings from coupon usage; (4) feelings of being a thrifty and smart shopper as a result of using coupons; (5) the necessity of subscribing to extra newspapers and magazines in order to obtain coupons; (6) the necessity of purchasing nonpreferred brands in order to take advantage of coupon offers; and (7) the need to shop at different grocery stores in order to avail oneself of coupon offers.

Operationalizations

Specific operationalization of the above items and all other variables needed to test the theory of reasoned action are as follows:

Beliefs (B_i). Beliefs were measured on 7-point scales anchored with "entirely disagree" (−3) and "entirely agree" (+3) with "mixed feelings" (0) as a midpoint. "Using coupons enables me to save on my grocery bills" is an illustrative belief statement.

Evaluations (e_i). The evaluative component corresponding to the salient beliefs was measured by asking respondents to evaluate the consequences of each belief item on a 5-point scale ranging from "very bad" (−2) to "very good" (+2).

Attitude toward the act (Aact). Respondents were asked to express their attitude toward the act of using coupons on 7-point semantic differential scales. Scale anchors were: foolish/wise, useful/useless, waste of time/wise use of time, valuable/worthless, and good/bad.

Normative beliefs (NB_j). Respondents indicated their normative beliefs with regard to each referent by responding to the following illustrative question: "Are your family and relatives in favor of your using coupons?" (cf. Oliver and Berger 1979). Responses were measured on 4-point scales ranging from "strongly" (+3) to "not at all" (0).[5]

Motivation to comply (MC_j). Motivation to comply was operationalized with questions such as: "Do your family's and relatives' opinions concerning your use of coupons matter to you?" (cf. Oliver and Berger 1979). Responses were measured on 4-point scales ranging from "yes" (+3) to "no" (0).[6]

Subjective norm (SN). Two separate measures were used. One ($SN1$) was the standard Fishbein and Ajzen (1975) item worded: "Most people who are important to me think I (definitely should/definitely should not) use coupons." The second measure ($SN2$) involved the summation of three bipolar scales (foolish/wise, useful/useless, valuable/worthless) in response to the question: "Most people who are important to me probably consider my use of coupons to be. . . ."

Behavioral intentions (BI). Behavioral intentions were measured with the following question: "All things considered, what are the chances in 10 that when buying groceries this week or next you will use coupons from the following sources as a way of reducing your grocery bills?" Four types of coupon sources (newspapers, magazines, mail, and in/on package) were individually measured, each representing a separate indicator of couponing intentions.[7]

[3] These same analyses were replicated using covariance rather than correlation matrices. Results were identical for all key parameter estimates and for the chi-square statistics.

[4] This bias is fortuitous, in one sense, as evidence indicates that coupons work best with older, better educated, and urban married couples (Schultz and Robinson 1982). On the other hand, any implications from the present research are necessarily restricted to this narrow segment.

[5] Note that these are unipolar scales, since people are unlikely to be motivated to do the opposite of what their salient referents think they should do (cf. Ajzen and Fishbein 1980, p. 75).

[6] See note 5.

[7] An anonymous reviewer has correctly noted that this question format gets more at the probability of using coupons than at the

(*Continued p. 6.*)

Behavior. Retrospective self-reports of coupon usage were obtained by asking: "How often in the past month or so have you redeemed coupons at the grocery store that were obtained from. . . ." Alternatives ranged from "never" (0) to "everytime I shopped" (3) in response to four separate coupon sources: magazines, newspapers, direct mail, and in/on packages of previously purchased items. Each represents a separate indicator of coupon usage behavior.[8]

RESULTS

Response Rates

A total of 770 households returned questionnaires from both data collection waves, for a 59 percent response rate. Complete data were obtained, however, from only 533 respondents (41 percent). The large attrition rate was due primarily to (1) unmarried or widowed respondents' inability to answer spouse-relevant normative belief and motivation to comply questions, and (2) other respondents' failure to answer occasional questions. Because LISREL assumes that the data reflect a single, homogeneous sample, the following results are based on data from this subsample of 533 respondents.[9]

Model 1 Results

Model 1 (Figure A) represents the standard Fishbein–Ajzen representation. Relevant measurement-related results for the primary model are followed by the structural model findings for the primary model and its variants.

Measurement Model Evaluation. Standardized factor loadings, reliabilities, and proportions of variance extracted for the constructs and indicator coefficients are presented in Table 1, Part A. Notice first that two constructs ($\Sigma b_i e_i$ and $\Sigma NB_j MC_j$) had single indicators with coefficients and errors that were fixed at 1.00 and 0, respectively, thereby precluding the computation of measurement statistics. The indicator coefficients for the remaining constructs are generally high and statistically significant. Reliability levels for the constructs and indicators are generally moderate. The more conservative proportion-of-variance extracted index (Fornell and Larcker 1981), which indicates the amount of variance captured by a construct in relation to the amount of variance due to measurement error, demonstrates modest validity for the measurement model; all proportions exceed the minimal standard of 0.50, which indicates that the variance captured by the constructs exceeds the variance due to measurement error.

Structural Model Results. An initial matter is whether the maximum likelihood estimates for the various models in Table 1 and Figure A provide satisfactory fits to the data. The χ^2 values (bottom of Table 1) indicate that none of the models adequately accounted for the relationship between the observed sample correlations and the hypothetical population correlations. Because it is generally agreed that χ^2 should be used as a guide rather than an absolute index of fit (Bagozzi 1981; Bearden, Sharma, and Teel 1982; Bentler 1980; Fornell and Larcker 1981), other diagnostics need to be examined. Bentler and Bonett's (1980) incremental fit index, which compares a theoretical model's chi-square value with that obtained from a null model that constrains all parameters except error coefficients to zero, is particularly useful.

Incremental fits for all models in Table 1 were calculated based on the null chi-square value for Model 1 ($\chi^2_{136} = 6246$). The incremental fit percentages at the bottom of Table 1 reveal that Models 1 and 1a have incremental fits below 90 percent and that both Models 1b and 1c have incremental fits of 92.9 percent. According to the Bentler and Bonett (1980) heuristic, model fits of less than 90 percent are inadequate, which would mean that Models 1 and 1a are unacceptable but Models 1b and 1c are marginally acceptable. However, controversy surrounds the Bentler and Bonett heuristic. Bearden et al. (1982) concluded from their simulation studies that incremental fit indices

intention to do so. The reviewer goes on to note that some people use coupons by habit—or relatively mindlessly—and may not form an intention. While we agree with these points (and, in fact, have seen evidence in support of mindless coupon usage—see *Psychology Today* 1983), the fact remains that, regardless of format, people will rationalize their behavior when responding to a questionnnaire and indicate an intention (or behavioral probability) whether or not one truly exists. Any operationalization of coupon usage intentions is thus susceptible both to measurement and systematic errors.

[8] The use of retrospective self-reports rather than actual coupon usage behavior is a notable research limitation. The extent to which self-report data mirror actual coupon usage is problematic. A field study was performed to validate the accuracy of the self-report data. Research assistants were positioned in two grocery stores to observe unobtrusively actual coupon usage behavior. A sample of 205 shoppers, who were ignorant that their behavior had been observed, later received a mail questionnaire which included questions regarding self-reported coupon usage. Self-report data from the 146 responding households were correlated with their previously observed coupon redemption behavior. A statistically significant though modest correlation obtained ($r = 0.32$, $p < 0.001$). The absence of a stronger relationship is due, on the one hand, to the inherent fallibility of self-report data, and on the other, to imperfections in the validation procedure. Space limitations preclude a more detailed reporting; specific details are available on request.

[9] It is relevant to note that no meaningful differences in background characteristics, beliefs, and so forth were detected when the 237 respondents with partially missing data (which in many instances amounted to nothing more than one or two missing answers) were compared to the 533 respondents who provided complete data. A large proportion of the missing data was from unmarried, divorced, or widowed respondents who were unable to respond to those questions which operationalized spousal influence.

TABLE 1

MEASUREMENT RESULTS FOR MODEL 1 AND STRUCTURAL RESULTS FOR MODEL 1 AND ITS VARIANTS (MODELS 1a, 1b, 1c)

A. Measurement model results

Constructs and indicators	Standardized factor loadings	Reliabilities	Proportion of variance extracted
$\Sigma b_i e_i$	1.00[a]		
$\Sigma NB_i MC_i$	1.00[a]		
Aact		.941	.763
foolish/wise	.868	.753	
useful/useless	.796[b]	.634	
waste of time/wise use of time	.875[b]	.766	
valuable/worthless	.893[b]	.797	
good/bad	.929[b]	.863	
SN		.761	.614
*SN*1	.820	.672	
*SN*2	.744[b]	.555	
Intentions		.850	.587
Newspapers	.730	.533	
Magazines	.743[b]	.552	
Mail	.800[b]	.640	
In/on package	.788[b]	.621	
Behavior		.834	.543
Newspapers	.741	.549	
Magazines	.773[b]	.598	
Mail	.754[b]	.569	
In/on package	676[b]	.457	

B. Structural model results

		Standardized path coefficients			
		Model			
	Coefficients	1	1a	1b	1c
Exogenous paths					
$\Sigma b_i e_i \rightarrow$ *Aact*	(γ_{11})	.122[b]	.094[c]	.025	.025
$\Sigma NB_i MC_i \rightarrow$ *SN*	(γ_{22})	.509[b]	.497[b]	.387[b]	.387[b]
$\Sigma b_i e_i \leftrightarrow \Sigma NB_i MC_i$	(ϕ_1)	.085[c]	.085[c]	.085[c]	.085[c]
$\Sigma b_i e_i \rightarrow$ *SN*	(γ_{21})	—	.135[b]	—	—
$\Sigma NB_i MC_i \rightarrow$ *Aact*	(γ_{12})	—	.323[b]	—	—
Endogenous paths					
Aact → Intention	(β_{31})	.527[b]	.513[b]	.342[b]	.341[b]
SN → Intention	(β_{32})	.317[b]	.309[b]	.387[b]	.387[b]
Intention → Behavior	(β_{43})	.666[b]	.676[b]	.696[b]	.677[b]
Aact → *SN*	(β_{21})	—	—	.262[c]	.264[c]
SN → *Aact*	(β_{12})	—	—	.683[b]	.682[b]
Aact → Behavior	(β_{41})	—	—	—	.011
SN → Behavior	(β_{42})	—	—	—	.015
Chi-square:		775.37	710.23	446.25	446.07
Degrees of freedom:		115	113	113	111
Probability:		<0.001	<0.001	<0.001	<0.001
Incremental fit:[d]		87.6%	88.6%	92.9%	92.9%

[a] Fixed at 1.00.
[b] $p < 0.01$, one-tailed.
[c] $p < 0.05$, one-tailed.
[d] Bentler and Bonett's (1980, p. 599) "normed fit index."

below 0.95 indicate inadequate model fits. Yet their conclusion is limited to the two- and four-construct models tested in their simulations and is not necessarily applicable to the more complex models tested in the present research. Controversy notwithstanding, the fact remains that the fits for Models 1b, 1c, and all

models which follow are, at best, marginally acceptable.[10]

We now turn to the structural parameters. Although it has been established that Models 1 and 1a are poorly fitted, a few comments are needed to develop the logical progression to Models 1b and 1c. First, the results (Table 1) with regard to Model 1, the standard Fishbein representation, reveal a weak relationship between cognitive and affective attitude components (γ_{11}), a moderately strong linkage between normative structure and subjective norms (γ_{22}), and statistically significant causal paths to behavioral intentions from *Aact* (β_{31}) and from *SN* (β_{32}) and from intentions to self-reported behavior (β_{43}).[11]

The dual crossover effects of cognitive structure on subjective norms (γ_{21}) and of normative structure on *Aact* (γ_{12}) are tested in Model 1a. Both effects are statistically significant, indicating that shoppers' internalized norms are partially determined by their personal beliefs toward coupon usage and, to an even greater extent, that attitudes are influenced by internalizations of others' beliefs. An interesting dynamic is obviously operating and will be discussed in conjunction with the findings from the next model.

Model 1b tested dual crossover effects directly between *Aact* and *SN*, with reciprocal causation hypothesized. The impact of *Aact* on *SN* is slight but statistically significant, whereas the impact of *SN* on *Aact* is considerably stronger. However, in comparison to the results for Model 1a, the magnitude of the *Aact* and *SN* effects on intentions is reversed, with *SN* having a slightly stronger effect.

Returning to the dynamic just alluded to, we can better understand the findings for Models 1a and 1b by examining the pattern of correlations between the various referents, the expectancy-value items, and the *Aact* and *SN* indicators (Table 2). The fact that the desirable consequences from coupon usage ("rewards") are nearly as strongly correlated with the *SN* indicators as they are with *Aact* suggests an explanation for the household dynamics which underlie the crossover

TABLE 2

CORRELATIONS OF REFERENTS AND BELIEFS WITH *AACT* AND SUBJECTIVE NORM INDICATORS

	Aact[a]	*SN*1	*SN*2
Referents			
Spouse	.40	.42	.41
Family	.17	.31	.20
Friends/neighbors	.09	.20	.10
Beliefs			
Inconveniences			
Time/effort clipping coupons	−.39	−.25	−.27
Time/effort redeeming coupons	−.28	−.11	−.21
Encumbrances			
Subscribing to extra media	−.10	−.03[b]	−.07
Purchasing nonpreferred brands	−.11	−.06	−.05[b]
Shopping at nonfavorite stores	.01[b]	−.01[b]	−.03[b]
Rewards			
Saving on grocery bills	.56	.38	.47
Feeling of being a thrifty and smart shopper	.58	.37	.53

[a] For purposes of this analysis, the five bipolar scales that operationalized *Aact* were summed into a single, internally consistent index (α coefficient = 0.94).

[b] $p > 0.1$. All other correlations are statistically significant, with most significant at <0.001, $n = 533$.

effects manifest in Models 1a and 1b. In particular, we see that a positive attitude toward coupon usage is due in large part to one's perceptions that the effort will be rewarded in monetary savings and from the approbation of one's spouse as a result of investing the time and effort to cut grocery bills. Thus, to the extent that a shopper perceives his/her spouse (and, to a lesser extent, other referents) as supporting coupon use—and to the extent the effort is perceived as worthwhile—s/he will form a positive attitude toward coupon usage.

The last Model 1 variant, Model 1c, tested the hypothesis that *Aact* and *SN* have direct effects on behavior in addition to the effects mediated through behavioral intentions. The results do not support this hypothesis (see Table 1). Neither coefficient (β_{41}, β_{42}) is statistically significant, and the reduction in χ^2 from Model 1b to 1c is slight and insignificant. This finding concurs with Bagozzi's results (1981, 1982), but not with Bentler and Speckhart's (1981).

Model 2 Results

Model 2 (Figure B) extends the Fishbein–Ajzen representation in two ways: by postulating a multidimensional rather than unidimensional cognitive structure, and by postulating a multidimensional normative structure. Confirmatory factor analyses were performed

[10] Further demonstration of the modest suitability of models 1b and 1c is provided by examining the residual matrix of differences between the data correlation matrix and that reproduced by each model. For each model only eight of the 136 off-diagonal residuals were greater than 0.1, and only 31 were greater than 0.05. The mean absolute value of the off-diagonal residuals was 0.044 for both models, which reflects reasonable specification (cf. Aaker and Bagozzi 1979; Costner and Schoenberg 1973).

[11] The meaningfulness of this latter relationship could be questioned on grounds that demand effects, common methods bias, or other errors may offer rival explanations for the relationship, since coupon behavior was self-reported rather than actual. Two considerations reduce the seriousness of this potential problem. First, the self-reported behavioral measure was separated from the intention and other measures by one full month. Second, the field study results (see note 8) suggest that self-reported coupon usage is a moderately good, though certainly imperfect, indicator of actual behavior.

to establish empirically the dimensionality of these two structures. The cognitive structure analyses pitted a unidimensional ($\Sigma b_i e_i$) structure against three separate expectancy-value dimensions—perceived "inconveniences" of coupon usage, perceived "encumbrances," and perceived "rewards" (the specific components underlying each dimension appear in Table 2). Superiority of the multidimensional solution was supported, as the fit for the three-factor solution ($\chi^2_{11} = 23.5$, $p < 0.05$) was shown by a chi-square difference test ($\chi^2_3 = 413.3$, $p < 0.001$) to represent a significant improvement over the one-factor fit ($\chi^2_{14} = 436.9$, $p < 0.001$).

Model 2 further extends the Fishbein–Ajzen model through its multidimensional portrayal of normative structure. The expectation is that the referents studied in this research (spouse, family other than spouse, and friends/neighbors) should vary considerably in their coupon-relevant influence and should not, therefore, constitute a unified normative structure. To test this supposition a one-factor (three-indicator) confirmatory factor model was compared against a null model. Chi-squares for the two were 107.9 and 511.6, respectively, which indicates that the one-factor model was not much of an improvement (incremental fit $\cong$ 40 percent) over the null model. Ideally, a three-factor model would have been compared against the one-factor solution, but this was not feasible because only a single indicator was available for each factor. Thus, we have no concrete evidence to justify a three-factor representation of normative structure, but nonetheless assume such to be the case on logical grounds and in light of Ryan and Bonfield's (1982) similar showing.

Measurement Model Evaluation. Table 3 contains a summary of the measurement diagnostics for Model 2. Reliable measurement is indicated for all variables and constructs except the perceived encumbrances expectancy-value term ($EV3$). The amount of variance captured by this construct is less than that due to measurement error, obviously indicating unreliable measurement. Structural relations between this and other constructs are accordingly tenuous.

Structural Model Results. As with Model 1, the chi-square values (bottom of Table 3) indicate that neither Model 2 nor any of its variants adequately fits the data. However, turning to the incremental fit indices (bottom of Table 3), we see that Models 2a, 2b, and 2c all provide modest improvements in fit over the Model 2 null ($\chi^2_{300} \cong 8025$). The mean absolute residuals for these models are all below 0.05, which is further reason for regarding these models as reasonably good representations of the correlation data. Model 2, although poorly fit, is examined to provide a logical progression to the models that fit better.

The findings for Model 2 reveal that the three expectancy-value terms are statistically significant determinants of attitudes toward using coupons, with perceived inconveniences ($EV1$) and encumbrances ($EV3$) negatively related to *Aact* and perceived rewards ($EV2$) strongly positively related. In fact, these three disaggregated expectancy-value terms accounted for 59 percent of *Aact*'s variance, in contrast to the aggregated compound, $\Sigma b_i e_i$, in Model 1, which accounted for less than 2 percent of *Aact*'s variance. Likewise, two referents—spouse (NB_1MC_1) and family other than spouse (NB_2MC_2)—are shown to be significant determinants of subjective norms (with spouse being particularly influential), but friends/neighbors (NB_3MC_3) is not a significant factor. The structural parameters relating *Aact* and *SN* to intentions ($\beta_{31} = 0.531$ and $\beta_{32} = 0.311$, respectively) and intentions to self-reported behavior ($\beta_{43} = 0.676$) are all statistically significant and quite similar in magnitude to the corresponding parameters for Model 1 (Table 1).

The results for Model 2a represent a significant departure over those from Model 2. As can be noted in Figure B, Model 2a adds crossover effects of cognitive and normative structure elements, the former hypothesized to influence subjective norms and the latter *Aact*. Several notable findings obtain. First, Model 2a represents a substantial improvement in fit over Model 2 ($\chi^2_{diff} \cong 241$, $p < 0.001$, 6 df). Second, two of the three expectancy-value terms, especially "perceived rewards," are shown to significantly influence subjective norms; this supports the similar finding from Model 1a, which indicated a significant relationship between unidimensional cognitive structure ($\Sigma b_i e_i$) and subjective norms. However, in contrast to the results for Model 1a where the unidimensional structure term ($\Sigma NB_j MC_j$) was shown to have a significant influence on *Aact*, none of the individual referents in Model 2a is significantly related to attitudes toward coupon use.

The reason for the discrepant findings between Models 1a and 2a is problematic, of course, but one explanation extends from a possible statistical artifact in testing Model 1. Specifically, the aggregation of multiple, countervailing expectancy-value terms (i.e., rewards combined with inconveniences and encumbrances) led to a poorly constituted variable which, as it turned out, was weakly related to *Aact* and explained less than 2 percent of *Aact*'s variance. The considerable unexplained variance in *Aact* made possible a significant relationship between $\Sigma NB_j MC_j$ and *Aact*. In Model 2, where the expectancy-value terms were meaningfully disaggregated, a strong relationship between $EV2$ (spouse) and *Aact* obtained (accounting for 59 percent of *Aact*'s variance), thereby reducing the opportunity for the disaggregated normative structure terms in Model 2 to capitalize on much unexplained variance remaining in *Aact*.

Another notable finding for Model 2a is that the structural parameters relating *Aact* and *SN* to *BI* experience a reversal in magnitude in comparison to

TABLE 3

MEASUREMENT RESULTS FOR MODEL 2 AND STRUCTURAL RESULTS FOR MODEL 2 AND ITS VARIANTS (MODELS 2a, 2b, 2c)

A. Measurement model results

Constructs and indicators	Standardized factor loadings	Reliabilities	Proportion of variance extracted
*EV*1 ("Inconveniences")		.838	.726
b_1e_1	.977	.954	
b_2e_2	.706[a]	.498	
*EV*2 ("Rewards")		.757	.610
b_3e_3	.754	.569	
b_8e_8	.806[a]	.650	
*EV*3 ("Encumbrances")		.624	.362
b_4e_4	.563	.317	
b_5e_5	.697[a]	.486	
b_7e_7	.532[a]	.284	
NB_1MC_1 (Spouse)	1.000[b]	—	
NB_2MC_2 (Family)	1.000[b]	—	
NB_3MC_3 (Friends/neighbors)	1.000[b]	—	
Aact		.941	.763
foolish/wise	.868	.753	
useful/useless	.800[a]	.640	
waste of time/wise use of time	.878[a]	.771	
valuable/worthless	.892[a]	.796	
good/bad	.925[a]	.856	
SN		.758	.610
*SN*1	.793	.629	
*SN*2	.769[a]	.591	
Intentions		.889	.617
Newspapers	.750	.560	
Magazines	.763[a]	.581	
Mail	.821[a]	.672	
In/on package	.809[a]	.653	
Behavior		.833	.556
Newspapers	.750	.561	
Magazines	.783[a]	.612	
Mail	.763[a]	.582	
In/on package	.685[a]	.468	

B. Structural model results[c]

		Standardized path coefficients			
		Model			
	Coefficients	2	2a	2b	2c
Exogenous paths					
*EV*1 → *Aact*	(γ_{11})	−.082[d]	.039	−.075	−.075
*EV*2 → *Aact*	(γ_{12})	.713[a]	.897[a]	.951[a]	.951[a]
*EV*3 → *Aact*	(γ_{13})	−.116[a]	−.090[d]	−.139[a]	−.139[a]
NB_1MC_1 → *SN*	(γ_{24})	.483[a]	.085	.138[a]	.138[a]
NB_2MC_2 → *SN*	(γ_{25})	.098[d]	.062	.084[d]	.084[d]
NB_3MC_3 → *SN*	(γ_{26})	.047	−.024	.018	.018
*EV*1 → *SN*	(γ_{21})	—	.143[a]	—	—
*EV*2 → *SN*	(γ_{22})	—	.899[a]	—	—
*EV*3 → *SN*	(γ_{23})	—	−.037	—	—
NB_1MC_1 → *Aact*	(γ_{14})	—	−.005	—	—
NB_2MC_2 → *Aact*	(γ_{15})	—	−.032	—	—
NB_3MC_3 → *Aact*	(γ_{16})	—	−.042	—	—
Endogenous paths					
Aact → Intentions	(β_{31})	.513[a]	.348[a]	.356[a]	.354[a]
SN → Intentions	(β_{32})	.311[a]	.398[a]	.378[a]	.378[a]
Intentions → Behavior	(β_{43})	.676[a]	.696[a]	.696[a]	.678[a]
Aact → *SN*	(β_{21})	—	—	.814[a]	.814[a]
SN → *Aact*	(β_{12})	—	—	−.307[d]	−.306[a]
Aact → Behavior	(β_{41})	—	—	—	.023
SN → Behavior	(β_{42})	—	—	—	.002
Chi-square:		923.20	682.47	653.10	652.90
Degrees of freedom:		254	248	252	250
Probability:		<0.001	<0.001	<0.001	<0.001
Incremental fit:[e]		88.5%	91.5%	91.9%	91.9%

[a] $p < 0.01$, 1-tailed.
[b] Fixed at 1.00.
[c] All six exogenous constructs were correlated in all model tests, but to preserve space the 15 phi coefficients are not presented.
[d] $p < 0.05$, 1-tailed.
[e] Bentler and Bonett's (1980, p. 599) "normed fit index."

the Model 2 results. Whereas in the absence of crossover effects (i.e., Model 2) the *Aact* → *BI* coefficient ($\beta_{31} = 0.513$) dominated the *SN* → *BI* coefficient ($\beta_{32} = 0.331$), these coefficients were reversed for Model 2a—$\beta_{31} = 0.348$, $\beta_{32} = 0.398$. This occurred because the *SN* construct in Model 2a was augmented by the strong crossover effect from *EV*2, "perceived rewards" ($\gamma_{22} = 0.899$, $p < 0.001$), whereas *Aact* was virtually uninfluenced by any of the disaggregated normative components. Thus, including crossover effects enriches the *SN* construct with a personal influence factor, the effect of which is to strengthen the *SN* → behavioral intention linkage vis-à-vis the *Aact* → intention path. However, any conclusion concerning the relative superiority of *Aact* versus *SN* as a predictor of intentions would be ill-founded. The fact is that in this particular application of couponing behavior, *Aact* and *SN* are inextricably linked and operate together to influence coupon usage intentions.

Models 2b and 2c test the same relationships as Model 2a except that crossover effects are tested directly between *Aact* and *SN*, and unmediated effects of *Aact* and *SN* on behavior are examined also (Model 2c only). Both models represent significant improvements in fit over Model 2 ($\chi^2_{dif} \cong 270$, $p < 0.001$) and over Model 2a ($\chi^2_{dif} \cong 29$, $p < 0.001$). There are several revealing findings. First, the unmediated effects of *Aact* and *SN* on self-reported behavior (β_{41} and β_{42} respectively in Model 2c) are, as in the case of Model 1c, weak and insignificant ($\beta_{41} = 0.023$, $\beta_{42} = 0.002$).

A second result from including direct, bicausal paths between *Aact* and *SN* is a reversal (in comparison to Model 2) of the relative strength of the linkages between *Aact* → *BI* and *SN* → *BI*. Whereas the former linkage was stronger in the absence of crossover effects (Model 2), the latter path supersedes in Model 2b (see Table 3). This augmentation of the *SN* → *BI* linkage occurs, as it also did in testing Model 2a, because the subjective norm construct is enriched with personal influence when crossover effects are included.

The crossover relationships from *Aact* to *SN* (β_{21}) and from *SN* to *Aact* (β_{12}) are particularly interesting. As shown in Table 3, *Aact* has a strong, positive impact on *SN* ($\beta_{21} = 0.814$, $p < 0.001$) but *SN* has—inexplicably—a significant, negative effect on *Aact* ($\beta_{12} = -0.307$, $p < 0.001$). If interpreted literally, this finding would mean that personal attitudes run counter to internalized behavioral norms. Such a result, though a theoretical possibility (e.g., the "rugged individualist" eschews external influences), is clearly counterintuitive and aberrant for the couponing behavior examined in this study. The negative coefficient apparently is the result of complex, multicollinear relations among the various *Aact* and *SN* indicators and among the indicators of their respective cognitive and normative structures.

This confounding and the attendant interpretational uncertainty renders problematic the findings for Model 2b. Two additional analyses (not shown in Table 3) were performed to better understand the relations between *Aact*, *SN*, and behavioral intentions. Both analyses replicate Model 2b except that one (Model $2b_1$) excludes the *SN* → *Aact* path and the other (Model $2b_2$) excludes *Aact* → *SN*. The findings from Model $2b_1$ virtually mirror those from Model 2b. All coefficients are of similar magnitude, and the model fit, though statistically poorer compared to Model 2b ($\chi^2_{dif} \cong 4$, $p < 0.05$, 1 *df*), nonetheless represents a modest improvement (91.7 percent) over the Model 2 null. Model $2b_2$, by comparison, yields considerably different results: the model fit is substantially worse than Model 2b ($\chi^2_{dif} \cong 138$, $p < 0.001$, 1 *df*); the parameter linking *SN* → *Aact* (sans the *Aact* → *SN* path) is strong and positive ($\beta_{21} = 0.571$, $p < 0.001$); and the *Aact* → *BI* and *SN* → *BI* linkages are reversed (in comparison to Models 2b and $2b_1$), with the *Aact* → *BI* parameter ($\beta_{31} = 0.446$, $p < 0.001$) dominating the *SN* → *BI* parameter ($\beta_{32} = 0.273$, $p < 0.001$).

What can be concluded from these analyses? On statistical grounds alone, all three models (2b, $2b_1$, and $2b_2$) represent significant improvements over the basic model, Model 2, which excludes any linkages between *Aact* and *SN*. Furthermore, Model 2b is superior, in terms of data fit, to either reduced-form model. However, interpretational problems with Model 2b lead to the conclusion that the more parsimonious and only marginally inferior model, $2b_1$, provides a suitable alternative representation for the underlying correlational data. Added support for this conclusion is obtained by examining the results from similar reduced-form analyses that were performed on Model 2a, which, as previously discussed, modeled crossover effects from three expectancy-value constructs to subjective norms and from three normative constructs to *Aact*. Model $2a_1$, which is conceptually parallel to Model $2b_1$, excludes the three paths to *Aact*, while Model $2a_2$, parallel to $2b_2$, excludes the three paths to *SN*. Results from these analyses (not shown in Table 3) correspond closely to those from testing Model 2b. Specifically: (1) Model $2a_1$ represents a significant improvement over Model 2 ($\chi^2_{dif} \cong 238$, $p < 0.001$, 3 *df*) and (2) is statistically equivalent to Model 2a ($\chi^2_{dif} \cong 3$, $p > 0.05$, 3 *df*); moreover, (3) Model $2a_2$ does *not* represent a significant improvement over Model 2 ($\chi^2_{dif} \cong 7$, $p > 0.05$, 3 *df*), and, of course, (4) is inferior to Models 2a and $2a_1$.

Taken together, these results indicate rather clearly that the primary flow of influence is from cognitive and affective attitudes to subjective norms—not from normative structure and *SN* to *Aact*. Coupon users' personal beliefs and feelings evidently provide the basis for inferring important others' thoughts and feelings about the appropriateness of personal coupon usage.

DISCUSSION

By making wide-ranging claims about the world and being highly falsifiable, the theory of reasoned action is a valuable theory (cf. Chalmers 1976). The

present research is another in a continuing stream of studies that challenge certain of the theory's assumptions. The assumptions tested are that: (1,2) cognitive and normative structures are unidimensional; (3) attitudinal and normative influences are independent; and (4) attitudinal and normative factors influence behavior only via their mediated effects through behavioral intentions.

The Nature of Cognitive Structure

The present study supports prior research (Bagozzi 1981, 1982) in challenging the assumption that expectancy-value compounds necessarily aggregate into a single cognitive unit, $\Sigma b_i e_i$. We found that affective attitude, although tied theoretically to cognitive attitude (e.g., Bagozzi et al. 1979; Burnkrant and Page 1982), was barely related to the unidimensional representation of cognitive structure. In Model 1, $\Sigma b_i e_i$ accounted for less than 2 percent of *Aact*'s variance, whereas the multidimensional representation of cognitive structure with three separate expectancy-value terms (Model 2) explained nearly 59 percent of *Aact*'s variance.

Apparently, perceptions of the positive consequences from coupon usage (monetary savings, approbation from spouse) are relatively independent of the negative consequences (time spent collecting coupons, shopping at nonpreferred stores to avail oneself of couponing opportunities). A noncompensatory cognitive algebra appears to be involved such that moderate negative consequences of coupon usage do not offset a favorable consequence. In a sense, our findings represent a "cognitive side" counterpart to Abelson et al.'s (1982) empirical finding that good feelings and bad feelings are essentially two independent dimensions of individuals' affective registrations. If indeed consumers maintain relatively separate cognitive representations for positive and negative behavioral consequences, as appears to be the case in the present research, then adding all consequences together in typical Fishbein–Ajzen fashion amounts to little more than mixing apples and oranges—i.e., it results in a crude and nonexplanatory empirical compound. Further research on this issue certainly seems warranted.

The Nature of Normative Structure

When treated as an aggregated, unidimensional construct (ΣNB_jMC_j), normative structure was found to be a significant determinant of subjective norms (Model 1). When separated in Model 2 into multiple constructs (spouse, family other than spouse, and friends/neighbors), only spouse was strongly determinant of subjective norms. Yet a specific conclusion concerning the relative superiority of aggregated versus disaggregated normative structure is unwarranted, because (1) our statistical basis for delineating normative structure into separate referents is rather tenuous, and (2) both models explain nearly equivalent amounts of subjective norms' variance (26 and 30 percent for Models 1 and 2, respectively).

Interdependence of Attitudinal and Normative Influences

The major recent complaint leveled by consumer researchers against the theory of reasoned action is that it fails to distinguish sufficiently between personal (attitudinal) and normative influences on intentions—that there is redundancy between the components which creates "double counting" and which makes it difficult to disentangle their relative effects on behavioral intentions (Miniard and Cohen 1979, 1981, 1983; Mitchell and Olson 1981; Ryan 1982; Ryan and Bonfield 1975, 1980; Warshaw 1980). The present research further addresses the issue of attitudinal and normative interdependence by examining "crossover" effects in the fashion proposed by Ryan (1982). Two types of crossovers were tested: (1) "indirect" effects from cognitive attitude elements to subjective norms and from normative structure elements to *Aact*, and (2) "direct," bicausal effects between *Aact* and *SN*. The indirect effects reveal that cognitive attitude has minimal influence on *SN* when treated as a unidimensional construct ($\Sigma b_i e_i$), but that when modeled as multiple expectancy-value elements, cognitive structure (especially the "perceived rewards" construct) has a strong impact on subjective norms. Conversely, normative structure, when modeled as a unidimensional construct (ΣNB_jMC_j), has a strong crossover effect on *Aact*, yet none of the individual normative components is influential when treated as multiple, disaggregated constructs.

While these findings are probably behavior-specific, the following explanations for their occurrence may have useful implications for subsequent applications of the theory of reasoned action. Specifically, aggregated cognitive structure was not related to subjective norms because the summing of multiple, countervailing expectancy-value compounds led to a crude, poorly constituted variable that barely accounted for any variability in its own theoretical consequence, *Aact*, let alone contributed to the explanation of subjective norms. However, when meaningfully disaggregated into separate expectancy-value constructs, the positive consequence of coupon usage (i.e., perceived rewards) accounted for considerable variability both in *Aact* and in subjective norms. The apparent social-psychological dynamic is that those coupon users who consider their efforts worthwhile and personally rewarding are also likely to perceive that important others support and favor these efforts.

With regard to the other indirect crossover effect—normative structure to *Aact*—it is clear why only aggregated normative structure was related to *Aact*.

Because the aggregated normative construct, ΣNB_jMC_j, was modeled in conjunction with the crude, aggregated cognitive structure construct, it was able to capitalize on considerable variance in *Aact* that Σb_ie_i failed to explain. In contrast, because the disaggregated normative structure constructs, NB_1MC_1 to NB_3MC_3, were modeled in conjunction with the disaggregated cognitive structure elements that *did* account for considerable variability in *Aact*, there was less opportunity for chance relations between the disaggregated normative elements and *Aact*.

The important conclusion to be drawn from these findings is that the choice of modeling convention (i.e., whether cognitive and normative structure elements are aggregated into unidimensional constructs or disaggregated) plays a major role in determining the nature of indirect crossover effects. If, as in the present research, cognitive structure is actually multidimensional, then improperly modeling it as unidimensional will lead to erroneous conclusions concerning the actual relations between cognitive structure and *SN* and between normative structure and *Aact*.

Turning to the direct, bicausal crossover effects between *Aact* and *SN*, findings for the two relevant models (1b and 2b) are simultaneously inconsistent and consistent with one another. The inconsistency arises because Model 1b shows the *SN* → *Aact* path to be substantially stronger than the *Aact* → *SN* path, whereas Model 2b reverses this finding. The apparent reason for this discrepancy goes back to the improper, unidimensional modeling of cognitive structure in Model 1b, which, because it accounted for less than 2 percent of the variance in *Aact*, made it possible for *SN* to capitalize on considerable unexplained variance and thus appear to be a more influential determinant of *Aact* than *Aact* is of *SN*. Inconsistency aside, the two models nonetheless agree in showing *SN* to be more influential than *Aact* as a determinant of behavioral intentions.

Our results echo Ryan's statement that "behavioral intention is not a function of parallel, independent sets or of inseparable attitudinal and normative variables, but of a rather complex set of interdependencies" (1982, p. 274). *Aact* and *SN* were uniformly significant determinants of behavioral intentions across all models; however, the relative strength of the two effects varied from *Aact* having greater influence before crossover effects were modeled to *SN* being more influential afterward (with the exception of Model 1a).

What then should be concluded? Are coupon usage intentions influenced more by personal or by normative considerations? The rub is that neither conclusion is appropriate. In the case of coupon use, personal and normative factors are inextricably linked: the effects of one are contained in the other—"double counting" as it were. The relationship between the personal influence factor, "perceived rewards," and the referent, "spouse," is especially entangled in this study; favorably evaluating coupon usage is determined in large part by the personal belief that an important other (spouse) approves of one's efforts, while the perception that one's spouse favors one's coupon use depends on one's personal belief that the behavior is worthwhile in terms of monetary savings.

In this respect, our research reaffirms the previously cited criticism concerning the inseparability of personal and normative factors. Ryan and Bonfield's (1975) early effort to develop a social influence variable independent of attitude and Miniard and Cohen's (1983) more recent undertaking are crucial steps toward separating empirically confounded influences on behavioral intentions. Furthermore, our results together with Ryan's (1982) findings seem to justify the suggestion that future applications of Fishbein's behavioral intentions theory routinely test for crossover effects and avoid the temptation to draw conclusions regarding the relative superiority of *Aact* and *SN* on behavioral intentions, unless the crossover effects are trivial.

Mediated Vs. Unmediated Effects on Behavior

In support of the theory of reasoned action, we found that the effects of *Aact* and *SN* on self-reported coupon use are almost entirely mediated through behavioral intentions. This finding is inconsistent with Bentler and Speckart's (1981) results but supports a similar showing by Bagozzi (1981, 1982).

CONCLUSION

Eight different models of self-reported couponing behavior and its antecedents were tested. The strong behavioral intention → self-reported behavior relations across all models supports prior research in showing *BI–B* consistency (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975; Ryan and Bonfield 1975). It appears that even a mundane and relatively trivial act such as coupon usage can be partially accounted for by the theory of reasoned action.

Both personal attitudes and subjective norms played major roles in determining intentions to use coupons. In fact, these two influences explained a minimum of 38 percent of variance in behavioral intentions in poorly fitted models (e.g., Model 1) and as much as 48 percent of variance in models with better fits (e.g., Model 2b). However, relative influence varied from *SN* dominance when crossover effects were included to *Aact* superiority without such effects. Attempts at resolving which effect is more influential would be senseless, because an expectancy-value element, "perceived rewards," influenced both *Aact* and subjective norms.

Coupon use is a form of behavior in which household dynamics play an important role. Such behavior

affects not just the primary shopper but all family members (by taking the shopper's time away from other household activities, by requiring purchases of nonpreferred brands to avail oneself of coupon opportunities, by yielding savings which can be released for other household uses, and so on). Actual or perceived monetary rewards from coupon usage appear to foster favorable attitudes and lead to spousal encouragement to continue the behavior. Thus, spousal influence may have a real impact on one's intentions and behavior regarding coupons; alternatively, because of the false consensus notion (Ross 1977), the influence may be imagined—although significant nonetheless.

In conclusion, it is important to acknowledge the tentative character of the research findings due to several study limitations: (1) the possibility of selection bias due to the high attrition rate; (2) self-reported rather than actual behavior; (3) chi-square tests indicating unacceptable fits in every case; (4) borderline incremental fit indices with unknown distributional properties; and (5) some inconsistencies and anomalous findings in certain models.

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