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The authors suggest that people strategically manage—specifically, lower—their expectations to increase future satisfaction. Consumers who are more disconfirmation sensitive, that is, those who are more satisfied (dissatisfied) when a product performs better (worse) than expected, are hypothesized to have lower expectations. In contrast, the authors expect that consumers who are perfectionists will have higher expectations than those who are not. Results from a laboratory experiment and a field study are consistent with the hypotheses. Furthermore, the authors identify a possible third type of expectation ("as-if") that serves as a basis for post-purchase evaluation and provide preliminary evidence that it differs from both will and should expectations.

Strategic Management of Expectations: The Role of Disconfirmation Sensitivity and Perfectionism

The standard approach to studying satisfaction involves comparison of prior expectations with observed performance. Implicitly, previous authors have assumed that the expectations are based on information (including advertisements, product experiences, and so forth) a person is exposed to and that the person is a passive, if imperfect, integrator of information. In this article, we suggest that people actively (strategically) revise expectations to increase future satisfaction. In a series of studies, we show both that there is a general tendency to lower expectations and that the tendency is related to the individual traits of disconfirmation sensitivity and perfectionism. We also indicate how the results have implications for customer targeting and the desirability of influencing customer experience by lowering expectations after purchase.

Consider the following common statements: (1) "I hope I get an offer from ___, but I expect to be rejected"; (2) "We are aggressively trying to recruit this person, but I would say the likelihood of getting that person at best is 10%"; and (3) "If you want to be happy, lower your expectations." Furthermore, Diekmann and colleagues (1996) observed that before entering a real estate negotiation, buyers expected the sellers to make much higher offers than sellers actually made; sellers also expected the buyers to make much lower offers than buyers actually made. What is common in these situations is people managing (lowering) their stated expectations about a possible outcome to increase potential satisfaction.

We hypothesize that consumers will (strategically) decrease expectations to increase future satisfaction. In addition, we argue that the amount of the decrease depends on the person. Specifically, we expect that consumers who are more sensitive to the gap between performance and expectations (i.e., consumers who are more satisfied when products perform better than expected or more dissatisfied when products perform worse than expected) will have lower expectations than those who are less disconfirmation sensitive. In contrast, we expect that consumers' need for accuracy will make it more difficult to lower expectations; therefore, consumers who are perfectionists have more realistic and therefore generally higher expectations than those who are not. We use results from a laboratory experiment and a field study to support these hypotheses.

BACKGROUND AND HYPOTHESES

Satisfaction

Confirmation/disconfirmation plays a significant role in the consumer satisfaction process (Anderson 1973; Boulding et al. 1993; Cadotte, Woodruff, and Jenkins 1987; Churchill and Suprenant 1982; Oliver 1980, 1997; Oliver and DeSarbo 1988; Parasuraman, Zeithaml, and Berry 1985; Tse and Wilton 1988; Yi 1990; Zeithaml, Berry, and Parasuraman 1988). Although there has been some recent debate

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about the impact of performance minus expectations on service quality (Cronin and Taylor 1992, 1994; Parasuraman, Zeithaml, and Berry 1994; Teas 1993, 1994), disconfirmation has a significant effect on customer satisfaction (Bolton and Drew 1991a, b; Bolton and Lemon 1999; Brown and Swartz 1989; Spreng, MacKenzie, and Olshavsky 1996). According to the disconfirmation or gap model, satisfaction at time t is a function of observed product quality at time t and the disconfirmation at time t, that is, the difference between observed product quality at t and prior expectations about the product's quality (expectations at t − 1). Expectations about the quality of a new product are based on factors such as advertised product quality, published quality ratings, and so forth (Goering 1985; Kopalle and Lehmann 1995; van Raaij 1991).

We define disconfirmation-sensitive consumers as those who are more satisfied (dissatisfied) when products perform better (worse) than expected. Consequently, the impact of performance minus expectations on satisfaction should be higher for consumers who are more disconfirmation sensitive. Therefore, we propose an interaction effect of disconfirmation sensitivity and performance minus expectations on satisfaction. Furthermore, on the basis of prospect theory (Kahneman and Tversky 1979), Anderson and Sullivan (1993) and Mittal, Ross, and Baldasare (1998) suggest diminishing sensitivity of satisfaction to performance minus expectations. This leads to a quadratic term (Mittal, Ross, and Baldasare 1998) in the following model for satisfaction at time t (the main effect of disconfirmation sensitivity is included as a control):

$$(1)\ S_t = \gamma_0 + \gamma_1 Q_t + (Q_t - E_{t-1})[\gamma_2 + \gamma_3(DS)] + \gamma_4(Q_t - E_{t-1})^2$$
$$+ \gamma_5(DS) + e_1,$$

where

Q_t = observed quality at time t,
E_{t-1} = expected quality at time t − 1,
DS = disconfirmation sensitivity,
γ_0 = intercept, and
e_1 = error ~ Normal $(0, \sigma^2_1)$.

On the basis of the definition of disconfirmation sensitivity, we expect the following:

H_1: $\gamma_3 > 0$.

Effect of Disconfirmation Sensitivity on Expectations

The concept of cognitive dissonance is one of the most widely accepted in consumer behavior. Building on the work of Festinger (1957), several studies and reviews (Harmon-Jones and Mills 1999) have established the tendency of consumers to justify decisions post hoc. Steele (1988) and Steele and Liu (1983) contend that dissonance reduction may be conceived of as a strategic maneuver to accomplish self-affirmation. This is consistent with research on self-enhancing and self-deception, which suggests that people tend to describe themselves more positively than a normative criterion would justify (Fiske and Taylor 1991; Klar and Giladi 1999; Krueger 1998; Kruger 1999; Robinson and Ryff 1999). In a related discussion on self-handicapping and other forms of self-defeating behavior, Fiske and Taylor (1991) point out that the overriding point of self-handicapping behavior appears to be avoiding attributions of low per-

formance ability by such means as claiming to be chronically test-anxious, thus lowering performance expectation.

In a consumer context, one way to justify purchase decisions (Bagozzi 1991) is to ensure that postpurchase evaluations are positive. Following the gap model of satisfaction, firms can increase satisfaction by increasing perceived product performance or decreasing expectations. When performance is objective (e.g., the length of time a product lasts), it is difficult to increase (inflate) perceived performance. A viable alternative is to decrease expectations. To maximize anticipated satisfaction, a strategic (forward-thinking) decision maker will consider both "true" expectations (i.e., what the product will do; Boulding et al. 1993) and the nature of their satisfaction function. Therefore, a general tendency for consumers to understate expectations when evaluating a product might be expected, ceteris paribus. Although this in itself is interesting, such proclivity is unlikely to be uniform across individuals. Specifically, according to Equation 1, people who are particularly sensitive to the gap between performance and expectations (i.e., those who are more disconfirmation sensitive) stand to gain more by lowering expectations. Given evidence that customers strategically manage purchase decisions to control consumption (Wertenbroch 1998), it seems reasonable to assume that they could strategically manage expectations as well. Therefore, we propose the following hypothesis:

H_2: Ceteris paribus, consumers who are more disconfirmation sensitive will have lower expectations than those who are less disconfirmation sensitive.

Although disconfirmation sensitivity may vary by category (similar to involvement and innovativeness), we use trait-based measures in our studies.

Effect of Perfectionism on Expectations

If minimizing disconfirmation is the only factor that determines satisfaction, it would be optimal for everyone to have very low expectations. This does not happen for at least two reasons. First, expectations that lead to a purchase decision must exceed a certain threshold before any purchase decision/choice is made. Second, another force, perfectionism (Frost et al. 1990, 1993; Hewitt and Flett 1991), may elevate expected quality to a higher level. Specifically, the self-oriented perfectionism (Hewitt and Flett 1991), the "concern over mistakes" dimension of perfectionism (Frost et al. 1990), and consumers' need for accuracy (Fiske and Taylor 1991) would increase expectations. According to the concept of cognitive consistency (Fiske and Taylor 1991), consumers may want expectations and performance to match. Thus, consumers who are perfectionists (which includes the need to be right in their expectations/forecasts) should have more realistic (and therefore higher) expectations than those who are not:

H_3: Ceteris paribus, consumers who are perfectionists will have more realistic and therefore generally higher expectations than consumers who are not perfectionists.

Thus, disconfirmation sensitivity and perfectionism will have opposite effects on expectations: Disconfirmation sensitivity will reduce expectations, and perfectionism will lead them to be more accurate, that is, greater.

Model of Expectations

The essential contention of this article is that expectations are determined, in part, by the desire to enhance future sat-

isfaction. Consideration of potential future satisfaction is only one element of expectations formation. Actual experience, as incorporated in models of adaptive expectations, is an important and well-established basis for expectations (Johnson, Anderson, and Fornell 1995; Winer 1985). In addition, information provided by advertisements and other sources affects expectations (Boulding et al. 1993; Kopalle and Lehmann 1995; Oliver and Winer 1987; van Raaij 1991). Therefore, our article extends models of expectations to include the impact of disconfirmation sensitivity and perfectionism.[1] Specifically,

$$(2) \quad E_t = \beta_0 + \beta_1 E_{t-1} + \beta_2(I_t) + \beta_3(DS) + \beta_4(PN) + e_2,$$

where

E_t = expectations at time t,
I_t = information at time t (which includes observed quality, Q_t),
DS = disconfirmation sensitivity,
PN = perfectionism,
β_0 = intercept, and
e_2 = error ~ Normal $(0, \sigma_2^2)$.

In other words, we suggest that part of the error in the usual models of expectations is systematically associated with individual differences, specifically disconfirmation sensitivity and perfectionism. We expect that $\beta_3 < 0$ and $\beta_4 > 0$. In Study 1, which is a laboratory experiment, we test our hypotheses using subjects' will expectations, namely, their predictions of future events (Boulding et al. 1993). Will expectation is the standard that is typically used in the satisfaction literature (Boulding et al. 1993).

STUDY 1

The subjects were 60 MBA students at a business school in the Northeast. The product category used was car tires. Car tires is a reasonably high-involvement product category in which one important quality attribute, the mileage a tire lasts (*Consumers' Research* 1991), is not observable until use. The brand name was CAMAC, an unknown brand to the subjects. The quality attribute was the useful tread life of CAMAC tires. This study measured the expected level of quality, disconfirmation sensitivity, perfectionism, and satisfaction. Satisfaction was measured within subjects for five different levels of observed product quality in relation to subjects' expected product quality. We also measure optimism, involvement, and expertise as possible covariates that could affect expectations. The specific items appear in Appendix A. Subjects first read the following scenario and then responded to how long (in miles) they expect a set of CAMAC tires would last them:

Imagine you are on a long trip in your car and need new tires. You go to an American Automobile Association (AAA) recommended dealer to buy the tires and you find out that the only brand of tires available in the correct size is CAMAC all-season radial tires. The

CAMAC Tire Company has been in the tire business for over 50 years. The dealer shows you a copy of *Consumer Reports* that includes the results of two recent studies on car tires that were conducted by unbiased testing companies. One study reported the average useful life of CAMAC all-season radial tires was 41,500 miles, and the other reported 48,500 miles. You buy a set of CAMAC all-season radial tires, get the tires changed, and continue on your trip.

Next, subjects indicated how satisfied they would be (on a 0–100 "not at all satisfied"/"completely satisfied" scale) if the CAMAC tires lasted (1) 20,000 miles more than expected, (2) 10,000 miles more than expected, (3) the same as expected, (4) 10,000 miles less than expected, and (5) 20,000 miles less than expected. Finally, we measured (on 1–6 "strongly disagree"/"strongly agree" scales) perfectionism, disconfirmation sensitivity, optimism (the order of these 14 measures was randomized), involvement, expertise, and demographics.

Measures

Drawing on Frost and colleagues (1990) and Hewitt and Flett (1991), we used eight items to measure perfectionism (coefficient alpha = .69). Details of this and other measures are given in Appendix A. We used four items to measure disconfirmation sensitivity (coefficient alpha = .53), which has two primary components: happiness when expectations are exceeded (Items 2 and 4) and unhappiness when product performance falls short of expectations (Items 1 and 3).

The mean levels (of a possible 6.0) for disconfirmation sensitivity, perfectionism, involvement, expertise, and optimism are 4.76, 3.94, 3.54, 3.06, and 4.20, respectively. The measures for optimism consist of two items (correlation, r = .44); involvement, with three items, produced a coefficient alpha of .89; and the coefficient alpha for expertise (three items) is .81. Except for the correlation between expertise and involvement (r = .32), other interconstruct correlations range from −.08 to .15, and most are not significantly different from zero. Furthermore, the average intraconstruct correlations (ranging from .22 to .73) are noticeably higher than the interconstruct correlations. Finally, a factor analysis of all 20 items reinforced the expected pattern, producing factors representing perfectionism, disconfirmation sensitivity, involvement, expertise, and optimism and thus demonstrating the discriminant validity of the five scales used.[2]

Results

On average, subjects' expectations about the life of CAMAC tires was 46,161 miles, slightly above the mean of the two sources provided (45,000). The satisfaction and expectations equations (Equation 1 and a reduced form of Equation 2 that does not include lagged expectations) are estimated simultaneously through two-stage least squares.[3] To reduce collinearity between the gap, (Q − E), and the interaction (DS) × (Q − E), we mean-center the disconfir-

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[1]Note that covariates such as optimism, involvement, and expertise could affect expectations. We include these variables as controls in our studies. In Study 2, we test the impact of need for cognition and need for structure as well.

[2]Five factors had eigenvalues greater than 1, and the percent variance explained by each is 13.7%, 13.5%, 12.7%, 11.7%, and 10.5%, respectively.

[3]We obtain similar results for ordinary least squares, seemingly unrelated regression, and three-stage least squares.

mation sensitivity variable.[4] The analysis also includes optimism, involvement, and expertise to remove the effect of some obvious possible confounds. The results (Table 1) are encouraging.

Observed quality has the expected significant ($p < .01$), positive impact on satisfaction, as does observed quality minus expected quality $(Q - E)$. Furthermore, as expected, the squared value of the gap, $(Q - E)^2$, has a significant ($p < .01$), negative impact on satisfaction. The interaction between disconfirmation sensitivity and $(Q - E)$ has a significant ($p < .01$), positive impact on satisfaction. This suggests that the impact of $(Q - E)$ on satisfaction is higher for subjects who are more disconfirmation sensitive, consistent

with H_1. Furthermore, the interactions of perfectionism with both $(Q - E)$ and $(Q - E)^2$ were not significant.

As hypothesized (H_2), the effect of disconfirmation sensitivity on expectations is negative and significant (standardized beta = $-.34$, $p < .01$). Perfectionism has a positive, significant (standardized beta = $.33$, $p < .01$) effect on expectations, in support of H_3. Also, optimism affects expectations positively. Thus, the results of Study 1 support all the hypotheses.

Boulding and colleagues (1993) established the existence of separate will and should expectations. Will expectations are descriptive and predictive (measured as "Approximately how long [in miles] *would you* expect the set of CAMAC tires to last you?"), whereas should expectations are normative (measured as "Approximately how long [in miles] would you consider to be reasonable for a set of all-season steel belted radial car tires to last, or how long *should* the set of CAMAC last?"). In Study 1 we focused on will expectations. On the basis of the results, we conceptualize that a third type of expectations, "as-if" expectations, may be used as a standard to evaluate satisfaction after purchase; consistent with the theme of this article, as-if expectations should be lower than will expectations. In Study 2, in addition to measuring will and should expectations, we measure as-if expectations. As-if expectations were measured as "I would be neither satisfied nor dissatisfied if the set of CAMAC tires last ___ miles." We provide preliminary evidence that

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[4]Mean-centering disconfirmation sensitivity (where $\overline{DS}$ denotes mean disconfirmation sensitivity) gives $s_t = \gamma'_0 + \gamma_1 Q_t + (Q_t - E_{t-1})[\gamma'_2 + \gamma_3(DS - \overline{DS})] + \gamma_4(Q_t - E_{t-1})^2 + \gamma_5(DS - \overline{DS}) + e_1$. If the time subscript is omitted, when disconfirmation is positive (say, $Q - E = 1$) the corresponding change in satisfaction due to the disconfirmation is γ'_2 when $DS = \overline{DS}$. For high–disconfirmation sensitivity consumers ($DS > \overline{DS}$), this becomes larger, that is, $\gamma'_2 + \gamma_3(DS - \overline{DS})$, and it is lower for low–disconfirmation sensitivity consumers ($DS < \overline{DS}$). When the disconfirmation is negative (say, $Q - E = -1$), the corresponding change in satisfaction will be negative, $-\gamma'_2$, when $DS = \overline{DS}$ and more negative, $-\gamma'_2 - \gamma_3(DS - \overline{DS})$, for high–disconfirmation sensitivity consumers. For low–disconfirmation sensitivity consumers, it is less negative, $-\gamma'_2 + \gamma_3(\overline{DS} - DS)$, as expected.

Table 1
STUDY 1: WILL EXPECTATIONS AND SATISFACTION RESULTS (t-VALUES IN PARENTHESES)

Independent Variables	Unstandardized Solution Dependent Variables		Standardized Solution Dependent Variables	
	Expectations, E	Satisfaction	Expectations, E	Satisfaction
Intercept	1.40 (1.93)	27.45 (2.18)	—	—
Observed quality, Q	—	8.63 (3.11)	—	.42 (3.11)
Perfectionism, PN	.40 (2.81)	—	.33 (2.81)	—
Disconfirmation sensitivity, $(DS - \overline{DS})$	−.52 (−2.64)	.68 (.31)	−.34 (−2.64)	.01 (.31)
Gap, $(Q - E)$	—	8.69 (3.09)	—	.41 (3.09)
Gap-squared, $(Q - E)^2$	—	−2.89 (−7.57)	—	−.27 (−7.57)
$(DS - \overline{DS}) \times (Q - E)$	—	3.87 (2.82)	—	.10 (2.82)
Optimism	.18 (2.02)	—	.25 (2.02)	—
Involvement	.10 (1.08)	—	.14 (1.08)	—
Expertise	.17 (1.98)	—	— (1.98)	.27 —
Sample size	59	295[a]	59	295
R^2	.29	.65	.29	.65

[a]Satisfaction was measured (on a 0–100 scale) for five quality levels per subject.
Notes: $\overline{DS}$ = mean disconfirmation sensitivity = 4.76 (of a possible 6.0).

as-if expectations are distinct from will and should expectations (though high correlations exist among will, should, and as-if expectations).

STUDY 2

Two main issues addressed in Study 2 were (1) whether the satisfaction (Equation 1) and expectations (Equation 2) models produce similar results in a larger, real-world sample and (2) whether consumers have as-if expectations that they use after purchase to evaluate products.

Data in Study 2 were obtained through mall intercepts of 200 respondents that were conducted by a professional market research agency in a large Northeastern city. We again used car tires for this study, because they represent a relatively high-involvement durable good for consumers in a mall intercept study; we used tread life to represent the quality of the product, and CAMAC was the brand of car tires. There are six major differences between Studies 1 and 2. First, observed quality was manipulated between subjects. Second, we measured both prior expectations and updated expectations (after subjects observed the quality of the product). Third, a ten-minute distractor task was introduced before subjects observed (learned) the quality (life in miles) of the tire; the distractor task consisted of completing a survey on retail stores' sales in a small city. Fourth, we measured will, should, and as-if expectations. Fifth, we measured two additional possible covariates: the need for cognition (Inman, Peter, and Raghubir 1997) and the need for structure (Raghubir 1994). Sixth, as shown in Appendix B, to develop a more reliable scale for disconfirmation sensitivity, we modified the disconfirmation sensitivity measures used in Study 2 and added two more items. We measured the covariates using two items. Expectations were measured in number of miles, and all other measures used seven-point scales.

An overview of the study is shown in Appendix C. In this study, five levels of manipulations were used for observed quality in a between-subjects design: 20,000, 30,000, 40,000, 50,000, and 60,000 miles. On average, respondents drive 19,076 miles each year, and 99% own a car. Of the respondents, 43% were men; median education was a college degree, and median annual household income was between $45,000 and $60,000. Approximately 78% had purchased car tires in the past two years.

Convergent Validity

The mean levels (of a possible 7.0) for disconfirmation sensitivity, perfectionism, involvement, expertise, and optimism are 5.54, 3.67, 4.21, 3.52, and 5.51, respectively. A factor analysis of the six items for disconfirmation sensitiv-

ity showed one factor. The average interitem correlation is .23 with a coefficient alpha of .64. Although this is higher than in Study 2, it continues to be lower than that for other measures because it captures two aspects (positive and negative disconfirmation). The eight items of the perfectionism scale also loaded on a single factor. The average interitem correlation is .49 and the corresponding coefficient alpha is .88. The average interitem correlations for the covariates involvement, optimism, need for cognition, need for structure, and expertise are .58, .45, .36, .35, and .45, respectively.

Discriminant Validity

The average interconstruct correlations are very low (range is −.01 to .28), and most of the interconstruct correlations are not significantly different from zero. Furthermore, the average intraconstruct correlations (ranging from .23 to .58) are much higher than the interconstruct correlations. A factor analysis of all 24 items reinforced the expected pattern, producing factors representing perfectionism, disconfirmation sensitivity, involvement, expertise, optimism, need for cognition, and need for structure.[5]

Results

The means of prior should, will, and as-if expectations were 45,444, 41,379, and 35,689, respectively, and all pairs were significantly different ($p < .01$). Table 2 shows how will, as-if, and should expectations were updated with quality experiences. Whereas will expectations updated well when quality fell above and below expectations (suggesting that a standard Bayesian process was operating), as-if expectations were in general less changeable than will expectations. Furthermore, there appears to be a "floor" for as-if expectations; they tended to decrease less when quality was less than expectations compared with the increase when quality exceeded expectations. As expected, should expectations increased when quality exceeded expectations but remained fairly constant when quality fell short of expectations. Although these results are encouraging, given the likely simultaneous relation among the three types of expectations (the pairwise correlations range from .70 to .79), further work is needed to establish their discriminant validity (e.g., multi-item scales) and the process by which they are formed.

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[5]Seven factors had eigenvalues greater than 1, and the percent variance explained by each is 20.6%, 10.5%, 8.7%, 8.3%, 7.5%, 6.6%, and 5.5%, respectively.

Table 2
STUDY 2: IMPACT OF QUALITY EXPERIENCES ON WILL, AS-IF, AND SHOULD EXPECTATIONS (IN THOUSANDS OF MILES)

Quality Experience	Sample Size	Will Expectations		As-If Expectations		Should Expectations	
		Prior	Updated	Prior	Updated	Prior	Updated
20	36	42.03	30.15	37.78	36.06	44.89	40.14
30	41	38.41	34.51	30.05	28.85	41.10	41.46
40	42	39.32	42.14	35.19	36.96	42.76	42.74
50	38	45.13	52.50	37.29	41.45	51.84	55.26
60	39	42.41	55.00	38.67	48.10	47.18	55.69

Next, we present our results using will expectations.[6] To consider the possibility that disconfirmation sensitivity and perfectionism could affect both prior and updated expectations, we simultaneously estimated a system of three equations: one for prior expectations,[7] one for updated expectations, and one for satisfaction. The two-stage least squares estimates are presented in Table 3.[8]

As in Study 1, we mean-centered disconfirmation sensitivity. Observed quality is significantly ($p < .01$), positively related to satisfaction, as expected. Similarly, the difference between observed quality and expectations is significantly ($p < .01$), positively related to satisfaction, though the effect decreases (because the coefficient of the squared deviation, $[Q - E]^2$, is negative and significant; $p < .01$) as the gap increases. As hypothesized (H_1), disconfirmation sensitivity positively and significantly ($p < .01$) interacts with the difference between observed quality and prior expectations.[9] The expected life of a typical brand is significantly ($p < .01$), positively related to prior expectations. Disconfirmation sensitivity has a significant ($p < .05$), negative effect on prior expectations, and perfectionism has a significant ($p < .01$), positive effect. Unsurprisingly, updated expectations are significantly ($p < .01$), positively related to observed quality and prior expectations, and observed quality has a stronger impact (standardized beta of .69 versus .20); this would be expected when the prior is weak, as it is in this case because the product is new. Of the covariates, optimism is significantly ($p < .05$), positively related to updated expectations, but involvement and expertise show no significant relation. Neither need for cognition nor need for structure has a significant effect on respondents' expectations; therefore, we dropped these variables, and Table 3 reflects the revised estimates.

DISCUSSION

In this article, we suggest that people strategically manage the level of expectations they use to evaluate satisfaction

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[6]We obtain similar results for as-if and should expectations.

[7]We include the expected life of a typical brand of tires as another determinant of prior expectations. Therefore, prior expectations are modeled as a linear function of the expected life of a typical brand, disconfirmation sensitivity, perfectionism, and the covariates.

[8]The results are again essentially the same for ordinary least squares, seemingly unrelated regression, and three-stage least squares.

[9]We also tested whether high positive (negative) disconfirmation-sensitive subjects were more (less) satisfied when performance was higher (lower) than expectations. The respective coefficients were not significant for any of the three measures of expectations.

Table 3
STUDY 2: WILL EXPECTATIONS AND SATISFACTION RESULTS (t-VALUES IN PARENTHESES)

Independent Variables	Unstandardized Solution Dependent Variables			Standardized Solution Dependent Variables		
	E_0	E_1	Satisfaction	E_0	E_1	Satisfaction
Intercept	.09 (.22)	−.23 (−.47)	3.35 (8.35)	—	—	—
Expected life of a typical brand of tires	.77 (16.65)	—	—	.75 (16.65)	—	—
Prior will expectations, E_0	—	.26 (4.00)	—	—	.20 (4.00)	—
Observed quality, Q	—	.65 (14.90)	.36 (3.71)	—	.69 (14.90)	.26 (3.71)
Perfectionism, PN	.24 (5.56)	.10 (2.09)	—	.24 (5.56)	.10 (2.09)	—
Disconfirmation sensitivity, $(DS - \overline{DS})$	−.20 (−2.33)	.01 (.15)	.13 (1.04)	−.11 (−2.33)	.01 (.15)	.05 (1.04)
Gap, $(Q - E_0)$	—	—	.78 (8.59)	—	—	.61 (8.59)
Gap-squared, $(Q - E_0)^2$	—	—	−.10 (−3.07)	—	—	−.14 (−3.07)
$(DS - \overline{DS}) \times (Q - E_0)$	—	—	.27 (3.42)	—	—	.17 (3.42)
Optimism	−.01 (−.26)	.14 (2.30)	—	−.01 (−.26)	.11 (2.30)	—
Involvement	.02 (.35)	−.05 (−1.02)	—	.02 (.35)	−.05 (−1.02)	—
Expertise	−.05 (−1.03)	−.02 (−.45)	—	−.05 (−1.03)	−.02 (.45)	—
R^2	.65	.60	.74	.65	.60	.74

Notes: Sample size = 196. $\overline{DS}$ = mean disconfirmation sensitivity = 5.54 (of a possible 7.0). E_1 = updated will expectations.

after purchase. Moreover, subjects who are more sensitive to the gap between observed quality and expectations have lower stated expectations. Why don't people reduce their expectations to zero? We argue that this occurs not only because a minimal level is needed to justify purchase but also because people have difficulty maintaining widely different expectations. In other words, some form of need for accuracy or intellectual honesty acts as a counter to the benefits of reducing expectations. Our results show that perfectionists indeed have higher expectations than nonperfectionists do.

We also suggest that a third type of expectation (as-if expectation) may exist beyond the will and should expectations Boulding and colleagues (1993) investigate. Our results are consistent with comments such as "I expect it to last ___, but I'll be satisfied if it lasts ___." We suggest that the first blank is a will expectation and the second is an as-if expectation. In effect, people may mentally keep two sets of expectations (accounts), one for making decisions and another (more generous) one for evaluating satisfaction. When respondents are asked for a single expectation that does not specify type, they may give a convex combination of the two.

As Boulding and colleagues (1993) argue in the context of perceived service quality, the disconfirmation model of satisfaction leads to the strategic implication that firms should try to lower expectations to maximize customer satisfaction. Our analysis suggests that to enhance future satisfaction, customers themselves will strategically manage (lower) their expectations to reduce postpurchase dissonance. This implicitly assumes that disconfirmation sensitivity itself cannot be strategically managed by consumers. It is possible that consumers can manage both expectations and disconfirmation sensitivity; we leave this issue for further research.

Further research is needed to investigate whether our results generalize to other product categories. Work is needed to understand the psychological processes at work, specifically, to examine whether separate will and as-if expectations exist and how they relate both to each other and to general (unspecified) expressions of expectations (i.e., Do people give will expectations or some combination of will and as-if when questioned?). In addition, other constructs, such as regret minimization, need to be related to our expectations paradigm. Also, different operationalizations of the disconfirmation sensitivity and perfectionism constructs are worth investigating, as is their relation to other constructs. For example, Steele, Spencer, and Lynch (1993) propose that people with high self-esteem should be less inclined to rationalize in dissonance-inducing situations than people with low self-esteem. This suggests that disconfirmation sensitivity may be inversely related to self-esteem. Relatedly, inter- and intraindividual comparisons may influence expectations and satisfaction and are worth investigating.

Regarding the construct of as-if expectations, more work remains. Given the correlation among as-if, will, and should expectations, it is important to develop a multi-item scale to measure as-if expectations and test for discriminant validity. Furthermore, exploring the relations among the three types of expectations (including the order in which they are formed and how the order of questions influences their measures) remains to be done. It would be interesting to discover whether these expectations results apply to managers and their decisions as well.

Furthermore, managers can use disconfirmation sensitivity and perfectionism as bases for segmentation. For example, they could concentrate on serving high–disconfirmation sensitivity and low-perfectionism customers (because such customers may have low expectations and therefore be easier to satisfy) and place less effort on low–disconfirmation sensitivity and high-perfectionism customers (because such customers would be less satisfied and therefore harder to retain). Another interesting implication involves lowering expectations. It is risky for a firm to lower these before purchase because it may end up lowering the likelihood of purchase as well. However, postpurchase lowering of expectations is desirable, perhaps through comparisons to earlier, inferior alternatives (e.g., "Remember when tires only lasted 20,000 miles?"). Finally, when a new product emerges with major improvements, it may be desirable to understate its quality not only to enhance claim credibility but also to (strategically) increase the chances of a positive postuse evaluation. Thus, although work remains to be done, the concept of the strategic management of expectations seems viable and worthy of the effort required to understand it more fully.

APPENDIX A
STUDY 1 MEASURES (USING A SIX-POINT SCALE)

Perfectionism (Coefficient α = .69)

I hate being less than the best at things.
I get mad at myself when I make mistakes.
It is very important for me to be right.
It makes me uneasy to see an error in my work.
One of my goals is to be perfect in everything I do.
I should be upset if I make a mistake.
Little errors bother me a lot.
People will probably think less of me if I make a mistake.

Disconfirmation Sensitivity (Coefficient α = .53)

I notice when product performance does not match the quality I expect.
Customers should be delighted whenever products exceed customer expectations.
I am very unhappy when products do not perform as well as I expect them to.
I am very happy when products perform better than I expect.

Involvement (Coefficient α = .89)

The performance of car tires matters a great deal to me.
The product category, car tires, is very relevant to me.
The product category, car tires, is very important to me.

Expertise (Coefficient α = .81)

Compared to others, I consider myself more knowledgeable about car tires.
I drive a car more than most people do.
I have purchased several tires in my life.

Optimism (Correlation, r = .44)

I tend to be optimistic in my expectations for product performance.
Do you consider yourself more of an optimist or a pessimist?

APPENDIX B
STUDY 2 MEASURES (USING A SEVEN-POINT SCALE)

Perfectionism (Coefficient α = .88)

Same items as in Study 2.

Disconfirmation Sensitivity (Coefficient α = .64)

I notice when product performance does not match the quality I expect from the product.

Customers should be delighted when products perform better than expected.

I am not at all satisfied when products perform worse than I expect.

I am very satisfied when products perform better than I expect.

Customers are legitimately irritated when products perform worse than expected.

I typically compare a product's performance to my expectations for that product.

Optimism (Correlation, r = .52)

I expect to be better off in the future than I am now.
I consider myself more of an optimist than a pessimist.

Involvement (Correlation, r = .58)

The performance of car tires is very important to me.
The product category, car tires, is very relevant to me.

Expertise (Correlation, r = .45)

Compared to others, I consider myself more knowledgeable about car tires.
I drive a car more than most people do.

Need for Structure (Correlation, r = .37)

It upsets me to go into a situation not knowing what I can expect.
I enjoy having a clear and structured mode of life.

Need for Cognition (Correlation, r = .36)

I would prefer complex to simple problems.
I really enjoy a task that involves coming up with new solutions to problems.

APPENDIX C
OVERVIEW OF STUDY 2

Perform a sight screen for subjects ages 18 years and older and give a brief introduction; ask whether subjects own a car, how many miles they drive in a year, whether they purchased car tires in the past three years, and how long a typical set of car tires lasts an average driver. Then present the following situation:

Imagine you are on a long trip in your car. Inadvertently you drive over a road hazard that slashes two of your all-season steel-belted radial tires. You realize that the tires need to be replaced and so you get the attention of a highway patrolman who calls for a tow truck.

The tow truck takes you to the nearest gas station, which also happens to be the only gas station in the area. You notice that the dealer is an American Automobile Association (AAA) recommended dealer. In the gas station you notice a prominently displayed brand of all-season steel belted radial tires—CAMAC, made by The CAMAC Tire Company, manufacturer of all types of radial tires. The display also indicates that the CAMAC Tire Company has been in the tire business for over 50 years in the United States.

As you are considering which brand of tires to buy, the dealer inquires about the tire size you need. You find out that the only brand of tires available in the correct size is CAMAC's all-season steel belted radial tires, and so you decide to buy them and continue on your trip.

Measure prior will, should, and as-if expectations. Respondents complete a ten-minute distractor task. Upon completion, they read the following:

Upon buying the CAMAC tires, you have the mechanic put them on the car and continue on your journey. You return home after a refreshing trip.

You have been driving the same car since the trip. Some time later, you notice that the CAMAC all-season steel belted radial tires need replacement. You observe that the CAMAC tires lasted ___ miles.

Measure satisfaction and updated will, should, and as-if expectations. Measure perfectionism, disconfirmation sensitivity, expertise, involvement, need for structure, need for cognition, and optimism (items are presented in random order). Measure demographics, realism of the scenario presented in the study, and how interesting subjects found the study.

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