

# Sales contest research: Business and individual difference factors affecting intentions to pursue contest goals

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## Abstract

Calls for sales contest research (1980/81 and 1998) suggest glaring holes in our knowledge of how to design appealing contests, whether and to what extent contests motivate salespeople, and the types of behaviors contests provoke. This study adds to our knowledge of the relationship between sales force attitudes for sales contests and intention to pursue the contest by exploring the effects of business type, demographic, and psychological variables on this relationship. Using surveys and a sorting task for several sales contest designs, a national sample of a firm's multi-business unit sales force ( $n=620$ ) provided the data for our study. A replication with two additional companies confirms that intention to pursue sales contest goals is affected by several variables, particularly for consumer/commercial salespeople. The findings and ensuing discussion provide contest planners useful direction for anticipating likely sales force responses to sales contests.

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... we introduce a sales contest model and resulting propositions that identify needed research that we believe is necessary for increasing our understanding of how to design and implement sales contests that are effective at evoking positive attitudes and encouraging appropriate behaviors in pursuing contest goals. [Murphy and Dacin \(1998\)](#).

[Murphy and Dacin \(1998\)](#) review more than fifty years of sales contest research and identify gaps remaining since [Wildt, Parker, and Harris' \(1980/81\)](#) earlier call for research to improve sales contest effectiveness. [Murphy, Dacin, and Ford \(2004\)](#) began addressing these gaps by investigating characteristics of sales contests most likely to engender positive attitude. Sales contest characteristics investigated in the study included contest goals, competitive formats, award types, contest duration, and award values. The results indicated preference tendencies for

“outcome-based goals, limiting numbers of winners to 40% of the sales force, 3 months' duration, and with cash rewards at high value levels” (p. 135). They also found preference variations related to individual, supervisory and sales setting characteristics, along with a few differences by industry (consumer, industrial, health).

In the present study, we turn to another gap identified in the call for research and address the relationship between Attitude toward a Sales Contest (ASC) and Intention to Pursue Contest Goals. We also introduce hypotheses for potential moderators to this relationship including commitment, relationship to supervisor, status aspiration, and competitiveness as well as discussing why the effects will be different based on business unit type (consumer/commercial, industrial, health care). Further, we explore the effects of several demographic variables on the attitude–intention relationship. Responses from the nationwide sales force of a Fortune 100 company ( $n=620$ ) indicate that intentions to pursue contest goals are driven not just by ASC but also by individual difference variables and these effects vary by type of business unit. We then report the replication of these findings across two

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additional companies. In the closing discussion we identify contributions for practice, study limitations, and provide direction for future research.

## 1. Background and hypotheses

Following a lengthy history of special incentives research, [Murphy and Dacin \(1998\)](#) proposed following an attitudes–intentions–behaviors model to address outstanding questions concerned with effective sales contest design and implementation. Briefly, the authors suggest that when salespeople are given a sales contest they evaluate its components, forming an attitude toward the contest (ASC). ASC is the salesperson’s feeling or sentiment toward a sales contest while intentions concern “the choices of behavior that salespeople consider when deciding how to pursue the goal” (p. 6). The focus of [Murphy et al. \(2004\)](#) was on examining the design components of a sales contest that would engender positive ASC. Their research identified five components including contest goals, competitive formats, award types, contest duration, and award values and they demonstrated how ASC, determined by evaluations of these components, varied based on organizational and individual differences.

In this research, we focus on the next step in the model between attitudes and intentions. Admittedly, based on existing knowledge in sales management, human resource management, consumer behavior and psychology, attitude–intention has a somewhat obvious expectation — ASC will almost surely have a direct positive effect on intentions. Consequently, consistent with this well-established relationship and aligned with [Murphy et al. \(2004\)](#) proposition, we begin by offering the following hypothesis:

**H1.** ASC has a positive effect on intentions to pursue contest goals.

However, we acknowledge that this is merely a baseline hypothesis and now turn our attention to the main focus of our current research, the personal and organizational variables that may have an effect on this apparent relationship. In other words, variables either accentuating and/or overriding the expected attitude–intention relationship. For example, previous calls encourage, “investigating the effects of variables already associated with motivation. These include demographic (i.e., age, education, career stage), job related (i.e., business sector, experience, job classification, income), and psychological (i.e., achievement needs, commitment, relationship to supervisor) variables” ([Murphy et al., 2004](#), p. 11). Following, we extend this discussion by positing hypotheses relating the specific effects of many of these variables on the attitude–intention relationship. We believe the effects of these factors are worthwhile studying because they have been found to possess qualities affecting worker motivation and because they seem particularly pertinent in the competitive, accolades-to-the-winner situation provoked by sales contests. We also develop a hypothesis relating business type (consumer, industrial, health care) to the attitude–intention relationship. Finally, we explore the effects of several demographic variables (age, gender, experience).

### 1.1. Affective organizational commitment

Affective commitment, defined as the degree that individuals attach themselves to, identify with, and become part of an organization ([Johnston, Parasuraman, Futrell, & Black, 1990](#)), stems from the notion that salespeople develop attachments to the firm, identifying with the goals and values of the firm and desiring to maintain their relationship with the firm ([O’Reilly & Chatman, 1986](#); [Porter, Steers, Mowday, & Boulian, 1974](#)). [Scholl \(1981\)](#) suggests that commitment leads to behavioral patterns that include personal sacrifice for the organization, persistence in behaviors not dependent on rewards, and a preoccupation with the organization. Commitment is associated with reduced turnover ([Johnston et al., 1990](#); [Lucas, Parasuraman, Davis, & Enis, 1987](#)), enhanced motivation ([Lee, 1971](#)), a desire to see the firm prosper ([Lawler, 1979](#)) and increased effort ([Chonko, 1986](#); [Hunt, Chonko, & Wood, 1985](#)).

Given the nature of this construct, we believe that higher commitment provides the impetus for greater intentions to strive to accomplish contest goals, an expectation that would be subtle when Asc is higher and more apparent when Asc is low. Why? Each of the above thoughts concerning the effects of commitment on motivation and effort anchor [Murphy and Dacin’s \(1998\)](#) comment; “While all members of the sales force probably realize that management expects them to pursue contest goals, those with higher commitment are likely to have greater motivation to comply with these expectations... even if a highly committed salesperson has low-positive or even negative Asc, their intentions to pursue the contest goals may be high” (p. 11). In sum, we expect the effects of commitment on intentions to be present whether Asc is high or low. However, since at higher Asc most salespeople will be inclined to pursue contest goals, the effect of commitment on intentions will be more apparent as Asc decreases.

**H2.** Affective commitment will moderate the relationship between Asc and intentions to pursue contest goals, a tendency made more apparent when Asc is lower.

### 1.2. Relationship to supervisor

Recognizing that leaders may adapt different orientations when relating to different members of the sales force ([Tyagi, 1985](#)), an individual’s relationship to his or her supervisor can be viewed along a continuum, from “close trusted cadre” to “hired hand”. Closeness to one’s supervisor is thought to lead to (a) receiving more attention, (b) receiving greater support and encouragement, and (c) feelings of a less formal relationship with their supervisor ([Castleberry & Tanner, 1986](#)). Generally, salespersons with close relationships to their supervisor are thought to be motivated to engage in behaviors that maintain and build upon this valued relationship. Thus, a salesperson’s perceived relationship to a supervisor can play an important role in work intentions.

Similar to the previous expectation, we believe that greater closeness to supervisor affects intentions to pursue contest goals across the entire range of Asc. Here again, although the effect of a salesperson’s relationship to supervisor on intentions to

pursue a contest would be present when Asc is higher, it should more readily be observed when Asc is lower. That is, when Asc is higher, the attitude–intention relationship would lead most salespeople to intend to pursue contest goals albeit those with a closer relationship also have their intentions influenced by this relationship. Meanwhile, when a sales contest engenders lower Asc, although the attitude–intention relationship would suggest a decreased intention to pursue the sales contest, salespeople with a closer relationship to their supervisor will nonetheless intend to pursue contest goals so as to show support to their supervisor and to maintain and build on this valued relationship. Salespersons more distant from their supervisors do not have this relationship to lose and, in situations of lower Asc, will have lower intentions to pursue sales contest goals, preferring to maintain their focus/energies on other responsibility areas.

**H3.** Closeness to the supervisor will moderate the relationship between Asc and intentions to pursue contest goals, a tendency made more apparent when Asc is lower.

Achievement Needs, have been described as the personal striving of individuals to attain goals in their social environments. While once considered a Weberian work ethic variable (Furnham, 1982, 1984; Spence & Helmreich, 1983) achievement needs are now thought to comprise many underlying factors (Cassidy & Lynn, 1989) including status aspiration, competitiveness, acquisitiveness for money and material wealth, and mastery (Cassidy & Lynn, 1989; Jackson, Ahmed, & Heapy, 1976; Lynn, Hampson, & Magee, 1983; Spence & Helmreich, 1983). Of these factors, we focus on two, status aspiration and competitiveness.

Status aspiration is an achievement need reinforced by climbing the social status hierarchy (Cassidy & Lynn, 1989) and it has been associated with a high valence for recognition (Churchill, Ford, Walker, Johnston & Tanner, 2000). In their desire to draw positive managerial attention, salespeople with higher status aspiration are expected to pay particular attention to activities that enhance status. Sales contests provide an important means for sales personnel to gain this attention. Salespeople are aware of the “publicity value” of winning sales contests, especially since winners are frequently announced at special ceremonies or during annual meetings, affording opportunity for positive recognition by management. Thus, higher status aspiration salespeople, in their desire to gain this recognition, are expected to respond to this need by heightened intention to pursuing contest goals across a broad range of contest appeal.

Meanwhile, lower status aspiration salespeople, having less need for the publicity value associated with winning contests, will be likely to respond to highly appealing contests while being less interested in pursuing contests with lower appeal. As this suggests, at higher levels of contest appeal the effect should be less apparent. This is because most salespeople, including those with lower status aspiration, are motivated to pursue contest goals when appeal is higher due to the widespread tendency (e.g., H1 above) to pursue activities that are appealing.

Competitiveness is achievement need reinforced through the enjoyment of performing better than others. Cassidy and Lynn (1989) describe this motivation as “the enjoyment of compe-

tion with others with the ultimate goal of winning” (p. 303). Salespeople with higher competitiveness not only enjoy competition, they also judge their performance on the basis of how they perform compared to other members of the organization. Thus, they gauge success by performing better than peers and failure by performing worse. Sales contests provide a visible competitive situation for salespeople since standings in sales contests are usually posted and winners are lauded at contest close. Here again, although highly appealing contests are expected to be pursued across-the-board, highly competitive salespeople might be particularly prone to pursue contests — even less appealing contests — so as to satisfy their need to win.

Given these thoughts, the hypotheses for achievement need based on status aspiration and competitiveness are:

**H4.** Status aspiration will moderate the relationship between Asc and intentions to pursue contest goals, a tendency made more apparent when Asc is lower.

**H5.** Competitiveness will moderate the relationship between Asc and intentions to pursue contest goals, a tendency made more apparent when Asc is lower.

### 1.3. Organizational factors — Business type

Sales contests are used across many business types. In this study, we focus on three types, consumer/commercial, industrial, and health care. The nature of the selling domain varies between these groups in significant ways in terms of complexity of the sales process and the cost/risk associated with purchasing. Industrial and health care sales tend to be more complex and higher risk-for-buyer, with product choice and ensuing trust/loyalty toward sellers determined by extensive decision making processes (Churchill, Ford, Walker, Johnston, & Tanner, 2000). For sellers in these businesses, the short-term emphasis of sales contests must be carefully weighed against existing (long-term) objectives before salespeople can/should shift their energies toward attaining contest goals. Meanwhile, consumer/commercial salespeople tend to work in selling conditions that are less complex, with less risk-for-buyer. As such, the upside of pursuing contest goals would be less likely to be dampened by the potential for significant adverse consequences industrial and health care sales groups must consider.

**H6.** Salespeople in consumer/commercial businesses have greater intentions to pursue contest goals than salespeople in either industrial or health care businesses.

As noted earlier, in addition to the variables discussed above, the attitude–intention relationship could be affected by additional variables. Over time, many variables have been associated with motivation (see Churchill, Hartley, & Walker, 1985 for meta-analysis of 116 sales articles), all under the rubric of personal, organizational and environmental variables (as introduced by Walker, Churchill, & Ford, 1977 and popularly used hence). For this study, we’ve constrained additional variables to

age, education, career stage, experience, job classification, and income. Murphy and Dacin (1998) encouraged examination of these variables and management at the participating company appreciated the fact that these demographic variables are easily tracked in their sales groups. Despite prior motivation research on each, we decided to treat these variables as exploratory due to the equivocal effects they tend to have on motivation (Evans, Margheim, & Schlacter, 1982). In the analysis we include these variables in a preliminary model, with the intent to include those with significant effects in the full model (Fig. 1).

**2. Method**

*2.1. Sample characteristics and data collection procedure*

Data were gathered from the nationwide sales force of a Fortune 100 company and included salespeople from multiple business units spanning consumer/commercial, industrial, and health care. Management provided mailing labels for their salespeople along with a supportive letter. The mailing and survey collection were handled directly from our university and assurances of anonymity were provided. The final mailing included the management-sponsored cover letter, a sorting task, a survey, and an instructions page. Additionally, respondents were promised a summary of the research findings; over one-third of the respondents requested these findings. To further encourage response, a reminder letter was mailed three weeks after the initial mailing.

A total of 1250 sets of study materials were mailed. Approximately three weeks later, a follow-up letter was sent to the entire sample. This letter stressed the importance of the study to the management groups involved and encouraged

participation. After eight weeks 620 completed studies were returned—a response rate of 50%. Sample characteristics appear in Table 1.

*2.2. Research design*

As discussed, as salespeople peruse a sales contest their evaluation of the components of the contest are used to form an attitude toward the contest ( $A_{sc}$ ) that, in turn, affects their intentions to pursue contest goals. To assess  $A_{sc}$ , respondents sorted, from most favored to least favored, a stack of sixteen sales contests, each containing varying forms/levels of five sales contest components previously identified in Murphy et al. (2004). These components were contest goals, competitive format, award type, award value and contest duration. The specific instructions were for respondents to sort the contests “from the one they would most want management to offer...to the one they would least want management to offer.” Salespeople were then instructed to focus their attention on their most preferred contest as they responded to relevant survey items.

The survey provided the measures needed to examine the attitude–intentions relationship and the hypothesized effects of the proposed variables on this relationship. The survey contained multi-item scales for the  $A_{sc}$  measure, for intention to pursue contest goals, and for each of the variables we proposed would also affect intentions to pursue the contest goals.

*2.3. Measures*

Where possible, existing measures were used either in their original forms or adapted to the context of the study. The procedures used for the purification of measures included reliability analysis using coefficient alpha and factor analysis.

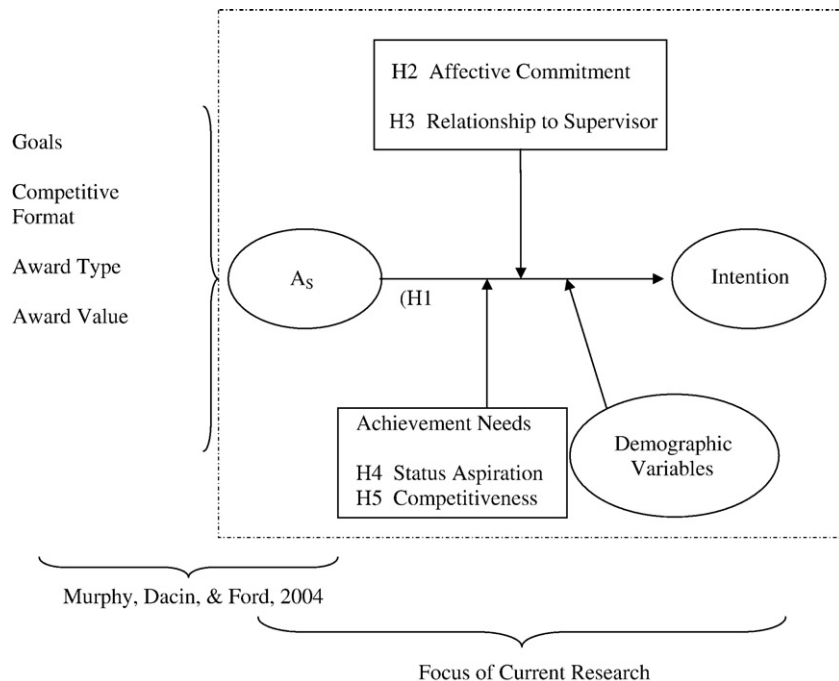


Fig. 1. The attitude ( $A_{sc}$ ) — intentions model.

Table 1  
Demographic and job-related characteristics<sup>a</sup>

	Total sample (n=620)	Consumer (n=158)	Industrial (n=234)	Health (n=145)	Significant differences p<.05
Age					
4 = 40–49	5.20	4.89	5.49	5.03	I>H
5 = 50–59					I>C
6 = 60 +					
Education					
4 = Bachelor's degree	4.11	4.08	4.13	4.13	–
5 = Advanced study					
Position					
2 = Junior level	3.62	3.57	3.65	3.68	–
3 = Regular level					
4 = Advanced level					
Years in sales	4.79	4.73	5.16	4.43	I>H I>C
Gender					
% Male	76.4	72.2	81.7	77.3	I>C
Supervisor' span of control					
3 = 7–8	4.19	4.06	4.44	4.20	I>H C>I
4 = 9–10					
5 = 11 +					
Frequency supervisor works with salesperson					
3 = 1 day monthly	4.26	4.05	4.41	4.43	C>I C>H
4 = 7–11 days yearly					
5 = 6 days or fewer yearly					
Compensation % salary	75.9	78.4	77.4	72.7	I>H C>H
Firm provides competitive pay package 7-pt scale; 7 = strongly agree	4.75	4.72	4.96	4.48	I>H
Satisfaction with compensation 7-pt scale; 7 = strongly satisfied	4.83	4.90	4.92	4.69	–
Special incentives held each year	1.81	2.37	1.38	2.00	C>I C>I C>H
I really like sales contests 7-pt scale; 7 = strongly agree	5.44	5.66	5.29	5.37	C>I

<sup>a</sup> 83 salespeople checked more than one business type; these were not included in the ensuing analyses.

Also, since reliability is a necessary but not sufficient condition for valid measures (Nunnally, 1978), procedures were used to assess the validity of the measures. Each of the measures is discussed next.

#### 2.4. Asc

Following discussions with management at the participating companies, we anchored items for each contest component with extent of appeal rather than the more traditional good/bad to

capture attitude. Additionally, to assure greater consistency with traditional attitude measures, the following comment was provided: “Appealing as used here holds the same meaning as ‘attractive/unattractive’ or ‘good/poor’.”

While focusing on the contest they found most appealing, respondents were asked to indicate the level of appeal they felt toward each contest component. The items used seven-point scales with anchors of 1=very unappealing and 7=very appealing. The specific items were: (1) The type of award; (2) The value of the award; (3) The competitive format; (4) The contest goals; and (5) The contest duration. The measure for Asc was derived by summing the appeal score (1–7) for each of the five contest components multiplied by their respective individual level importance scores provided from conjoint analysis of the total stack of 16 contests. Across all respondents, the mean Asc score for the highest ranked sales contest was 6.23 (SD=.73). In addition, a single item seven-point appeal measure of Asc was used to validate the conjoint-derived score (6.06 (SD=.98).

#### 2.5. Intentions

Respondents were asked to focus on their most preferred sales contest and reply to a three item measure asking the extent they would (1) be motivated to pursue the sales contest, (2) actively try to find ways to achieve the goals, and (3) intently try to win the contest. Using a seven-point scale anchored by “Strongly Disagree” and “Strongly Agree”, the measure performs well (coefficient alpha=.83).

#### 2.6. Commitment (Commit)

Using seven-point scales anchored, “strongly disagree”–“strongly agree,” the Jaworski and Kohli (1993) seven-item affective-based organizational commitment measure was used here. Collectively, the items represent the various qualities associated with affective commitment (i.e., attachment to the organization, personal sacrifice for the organization, persistence in behaviors not dependent on rewards, preoccupation with the organization). Following pretest results, one item was dropped from the measure. The final measure of affective organizational commitment was obtained by taking the average of the remaining six item scores.

#### 2.7. Relationship to supervisor (Relate)

The Tyagi (1985) measure, adapted from the Jones, James, Bruni, Hornick, and Sells (1977) eight item leadership behaviors measure, was used for this study. The only substantive modifications from the Tyagi measure were to put the items into first-person context and use seven-point instead of five-point scales. The final measure for relationship to supervisor was obtained by taking the average of the item scores. Pretesting led to dropping one item.

The remaining variables are the additional exploratory variables noted earlier. These represent additional psychological variables and demographic and job-related variables. These are discussed next.

Table 2  
Descriptive statistics and correlation coefficients for measures<sup>a</sup>

	Mean (S.D.)	Commit	Compete	Relate	Status	Sat. w/ Supr.	Sat. w/ Firm
Commit	6.20 (.72)	.783					
Compete	5.07 (1.19)	.06	.734				
Relate	5.75 (1.38)	.39**	.04	.947			
Status	5.57 (.97)	.21**	.48**	.09*	.695		
Satisfaction w/Supr.	5.59 (1.72)	.34**	.04	.88**	.05	–	
Satisfaction w/Firm	6.44 (.88)	.61**	.01	.25**	.04	.28**	–

\*\*  $p < .01$ .

\*  $p < .05$ .

<sup>a</sup> Reliability using coefficient alpha are shown in diagonal for multi-item measures.

### 2.8. Status aspiration (Status) and competitiveness (Compete)

Cassidy and Lynn's (1989) measures for status aspiration and competitiveness were adapted for this study. Whereas Cassidy and Lynn used a yes/no response format, for consistency with other measures seven-point scales anchored, "I never feel this way"—"I always feel this way" were used. Following a pretest ( $n = 31$  salespeople), each measure consisted of four items. For ensuing analyses, the final measures were obtained by taking the average of the respective four item scores.

### 2.9. Business type

A single item measure was used, with respondents selecting consumer/commercial, industrial, or health care. Respondents could choose multiple types but very few respondents chose more than one type—we excluded those who chose more than one business type from our analyses concerning business type.

### 2.10. Additional demographic variables

For the additional exploratory variables, single item measures were used for age, education, experience (number of years in sales), job classification (4 response choices ranging from trainee to "advanced level sales position,"), income (due to the broad range of incomes in the sample, satisfaction with compensation was used, providing a way to assess whether income satiety would be associated with less drive to pursue contest awards). As shown (Table 1), variation in several of these variables was present across the consumer/commercial, industrial, and health care subsets of the respondents.

### 2.11. Measures: Reliability and validation

The descriptive statistics for each of the multi-item measures used in the analyses and a correlation matrix are provided in Table 2. The diagonals contain reliabilities. With the exception of status aspiration (coefficient alpha of .69), all of the scales had coefficient alphas over .70 demonstrating adequate reliability for our study (Nunnally, 1978). For purposes of

assessing nomological validity, two single item measures of satisfaction were included in the analysis, satisfaction with the firm (Sat w/firm) and satisfaction with one's supervisor (Sat w/Supr). Respectively, high correlations were expected between each satisfaction item and the commitment (Commit) and relationship to supervisor (Relate) scales. Meanwhile, there was no theoretical reason to expect the satisfaction variables to be related to either status aspiration or competitiveness.

The correlation matrix shows an expected high correlation between status aspiration (Status) and competitiveness (Compete), two theoretically close constructs. Also as expected, high correlations between relation to supervisor (Relate) and satisfaction with supervisor (Sat w/Supr.) and between commitment (Commit) and satisfaction with the firm (Sat w/Firm) exist. Overall, evidence for nomological validity is indicated in that each of the measures act as they are expected in relation to other constructs within their nomological net (Peter, 1981).

Finally, the twenty items comprising the commitment, status aspiration, competitiveness, and relationship to supervisor measures were factor analyzed to assess whether the scales represent unique factors. If so, evidence of unidimensionality would be provided, indicating that a single construct underlies each measure (Hattie, 1985). All items loaded well on their respective scales (Table 3).

### 2.12. Procedures for testing hypotheses

As discussed, business unit type was expected to affect sales force response to sales contests (H6). Business unit was the only variable that was structural (i.e., not determined by individual difference). Therefore, we ran separate analyses for each business unit (consumer/commercial, industrial, health care), with ensuing findings used to assess whether business unit affects sales contest response.

Table 3  
Confirmatory factor analysis of scales<sup>a</sup>

Item	Factor 1	Factor 2	Factor 3	Factor 4
Commit1	.653			
Commit2	.621			.250
Commit3	.791			
Commit4	.502	.427		
Commit5	.619			
Commit6	.817			
Status1		.672		
Status2		.750		
Status3		.633	.232	
Status4		.630	.284	
Compete1		.388	.509	
Compete2			.712	
Compete3		.295	.763	
Compete4			.800	
Relate1				.862
Relate2				.897
Relate3				.846
Relate4				.852
Relate5				.883
Relate6				.895

<sup>a</sup> Varimax rotation was used for the analysis; all loadings over .20 are indicated.

The relationship between Asc and intentions and the effects of variables on the Asc to intention relationship were examined using multiple regression. Specifically, the exploratory variables were included in an initial model, with significant effect variables included in the ensuing full models. We followed the testing of the regression model by investigating the specific moderating effects on the attitude–intention relationship. We did this by following the suggestions of Cohen and Cohen (1983), Jaccard, Turrisi and Wan (1990), Aiken and West (1991) who suggest examining how the relationship under investigation changes at different levels of the moderator variable (at the mean, at one standard deviation above the mean and at one standard deviation below the mean) and then assessing whether the direction of the results coincide with the predicted direction of moderation.

To reduce potential effects of collinearity caused by introducing interaction terms including parameter estimates fluctuating with negligible changes in the sample, parameter estimates with signs that are ‘wrong’, theoretically ‘important’ variables with insignificant coefficients, and the inability to determine the relative importance of collinear variables (Mason & Perreault, 1991; p. 269), Asc and moderator variables were mean-centered (Cronbach, 1987). Expressing the independent variables as deviations from their means has the effect of reducing multicollinearity substantially (Cohen and Cohen, 1983; Yi, 1989). Additionally, due to difficulties inherent in detecting interaction effects in regression analysis, a relatively large significance level for the interaction effects was a priori set at  $p < .15$  (Pedhazur, 1982, recommends  $p$ -values from .10 to as high as .25).

### 2.13. Results

An initial model with just Asc and the exploratory variables (age, education, experience, job classification and satisfaction with compensation) indicated that none of the demographic or job-related variables were significant at  $p < .15$ . As a result, these variables were dropped from further analysis.

For each industry, analyses were repeated (Table 4). Analysis indicates that determinants of intention to pursue contest goals

vary across industries. For consumer/commercial salespeople the model adjusted  $R^2 = .468$  had significant Asc ( $\beta = .452$ ;  $p < .01$ ) as well as three significant interaction effects including Asc  $\times$  Relate ( $\beta = -.132$ ;  $p < .10$ ), Asc  $\times$  Compete ( $\beta = -.142$ ;  $p < .10$ ), and Asc  $\times$  Status ( $\beta = -.151$ ;  $p < .05$ ). The industrial model had a final model adjusted  $R^2 = .177$  with significant effects for only Asc ( $\beta = .359$ ;  $p < .01$ ) and the interaction effect of Asc  $\times$  Compete ( $\beta = -.137$ ;  $p < .10$ ). Finally, health care salespeople, with a model adjusted  $R^2 = .241$  had significant terms for Asc ( $\beta = .483$ ;  $p < .01$ ), and the interaction effects for Asc  $\times$  Relate ( $\beta = .147$ ;  $p < .15$ ) and Asc  $\times$  Compete ( $\beta = -.133$ ;  $p < .15$ ).

In the models, the effect of Asc is interpreted as the average effect of Asc across all observed scores of the other terms (Cohen & Cohen, 1983; Yi, 1989). Asc was significant ( $p < .01$ ) across all models, providing consistent support for H1. With mean centered variables, the follow-up analyses of the moderator effects (Aiken & West, 1991; Cohen & Cohen, 1983; Jaccard et al., 1990) provide support for the hypothesized direction (i.e., greater levels of the variable, the greater the effect on influencing intentions when contest appeal is lower). In the consumer/commercial model, significant findings provide support for moderating effects of relationship to supervisor (H3), status aspiration (H4), and competitiveness (H5). For industrial salespeople, only the moderating effect of competitiveness was significant, providing support for H5. Meanwhile, health care salespeople had an unexpected positive sign for the moderating effect of relationship to supervisor. Additionally, competitiveness was again significant, making competitiveness the only variable with consistent support (H5) across all business types.

### 2.14. Replication/model validation

Data from two additional companies were analyzed. The first was a consumer/commercial sales force and the second was an industrial products sales force. Using the same data collection and analysis procedures, 280 consumer/commercial salespeople received study materials;  $n = 130$  responded, a response rate of 46%. The results suggest even more pronounced

Table 4  
Regression models by industry<sup>a</sup>

Dependent variable	Independent variables	Consumer ( $n=158$ )		Industrial ( $n=234$ )		Health care ( $n=145$ )	
		Standardized beta	$t$ -value	Standardized beta	$t$ -value	Standardized beta	$t$ -value
Intention	$A_{SC}$ (attitude toward a sales contest)	.452	6.52***	.359	5.55***	.483	5.66***
	Commit (affective commitment)	.073	1.07	.094	1.32	-.050	-.57
	Relate (relationship to supervisor)	.087	1.26	-.027	-.68	-.068	-.77
	Compete (competitiveness)	.085	1.08	.246	3.43	.235	2.65***
	Status (status aspiration)	.105	1.39	-.77	-1.05	.072	.80
	$A_{SC} \times$ Commit	-.003	-.04	-.013	-.19	.050	.55
	$A_{SC} \times$ Relate	-.132	-1.87*	.042	.574	.147	1.56*
	$A_{SC} \times$ Compete	-.142	-1.67*	-.137	-1.68*	-.133	-1.39**
	$A_{SC} \times$ Status	-.151	-1.97**	-.064	-.79	-.038	.38
			Adj $R$ square = .468		Adj $R$ square = .177		Adj $R$ square = .241

\*\*\* $p < .01$ .

\*\* $p < .05$ .

\* $p < .15$ .

<sup>a</sup> 83 respondents reported that they work across two or more sectors; these were excluded from this analysis.

moderating effects on the attitude–intention relationship than the consumer/commercial results for the first company. The adjusted  $R^2$  for the final model was .490. Significant effects on intentions were shown for Asc ( $\beta = .684$ ;  $p < .01$ ) as well as for three interaction terms including Asc  $\times$  Relate ( $\beta = -.239$ ;  $p < .10$ ), Asc  $\times$  Compete ( $\beta = -.818$ ;  $p < .01$ ), and Asc  $\times$  Status ( $\beta = .520$ ;  $p < .01$ ). Based on follow-up tests of moderation suggested by Cohen and Cohen (1983), Jaccard et al. (1990), Aiken and West (1991), the coefficient is consistent with our hypothesized direction. The interaction coefficient for commitment was also negative but non-significant. In sum, support was found for H1 (main effect of appeal) H3 (relationship to supervisor), and H5 (competitiveness). At the same time, the sign for status aspiration was positive rather than negative, thus failing to support H4. Also, although the sign for commitment was negative as expected, it was non-significant. Thus, H2 was not supported. Overall, the only result inconsistent from the previous consumer/commercial group was the positive beta for status aspiration. The implication is that for this sales group the greater the status aspiration the lower is one's intentions to pursue contest goals when appeal is lower.

The second additional company, an industrial sales group, had 25 respondents (response rate 54%). For this group, the adjusted  $R^2$  for Asc was .215. Small sample size and resultant low power could explain the ensuing non-significant findings for the interaction terms although the interaction terms were negative (consistent with the previous industrial group) for commitment, status aspiration, and competitiveness.

### 3. Discussion

The purpose of this article was to revisit a gap in our knowledge of sales contests identified in Murphy and Dacin's (1998) proposed sales contest model then discuss and test hypotheses exploring this gap. As discussed, the basic expectation that Asc is positively related to intentions to pursue contest goals was supported by the findings, attesting to the need of management to get it right; designing sales contests that engender positive attitude is clearly associated with greater intentions to pursue contest goals. Whereas we acknowledge that based this hypothesis was merely based on what is already known in several literatures and a "statement of the obvious," testing the attitude–intention relationship established the foundation for the ensuing examination of moderator effects on this relationship. As our results suggest, several variables moderate the attitude–intention relationship and the effects of these variables are contingent on business type.

Consumer/commercial salespeople seem more likely to pursue appealing contests than are their counterparts in industrial and health care environs. As discussed, the nature of the buying situation could explain this difference. Characteristics of the industrial and health care sales environs (including complexity, buying cycle length, and cost/risk for buyers) leads salespeople in these businesses to maintain a strong focus on the long-term situation. That is, for these sellers the short-term goal focus of sales contests must be carefully weighed against risking

relationships with buyers and accompanying effects on trust before industrial or health care salespeople can/should shift their energies toward attaining contest goals. Indeed, these salespeople rely heavily on fostering long term trust by providing support, services, and assurances that are demonstrably made on behalf of customers. Support for this thesis comes from an additional survey item. The item asked the extent of agreement that pursuing contest goals typically requires deviation from the strategic goals of the territory. Consumer/commercial respondents were significantly less likely to agree to this statement than industrial ( $p < .05$ ) or health care ( $p < .05$ ). With these thoughts in mind, little wonder that consumer/commercial salespeople seem more responsive to sales contests than their counterparts in industrial and health care sectors.

Across all business types, moderating effects were not present for commitment to the organization. Given that commitment has so many positive qualities suggestive of increased effort (personal sacrifice for the organization, persistence in behaviors not dependent on rewards, preoccupation with the organization, enhanced motivation, desire to see the firm prosper), this was unexpected. However, a possible explanation is that the manipulation (a sales contest) introduced a short-term goal orientation giving committed salespeople "a way out". That is, when a short-term goal engenders lower Asc, salespeople highly committed to the organization could justify dismissing the sales contest, using the rationale that it would have caused them to unnecessarily deviate from other ongoing efforts to help the firm.

Meanwhile, relationship to supervisor had significant moderating effects for both consumer/commercial and health care salespeople. However, only consumer/commercial had a moderating effect that was consistent with the hypothesized direction. Further, this effect was validated by the second consumer/commercial products company. In sum, the effect suggests that if a sales contest engenders lower Asc, consumer/commercial salespeople with a closer relationship to their supervisor will be more likely to intend to pursue contest goals; by so doing, they show support for goals their supervisor sets for them. Overall, this suggests that when consumer/commercial sales managers have successfully developed close relationships, they are likely to gain greater effort across a wide range of tasks. This awareness leads to a cautionary note for consumer/commercial sales managers: if managers misinterpret the cause of good effort, thereby repeating unappealing sales contests, a salesperson's relationship to their manager could ultimately suffer and/or salespeople might become disenchanted with the company, affecting downstream work motivation and commitment.

The unexpected opposite effect for the health care sales group (note: industrial also had a result inconsistent with the hypothesized direction but it was not significant) might be due to the possibility that health care salespeople with closer relationships to their supervisors would feel more comfortable than their less close-to-supervisor colleagues in not pursuing sales contests. For them, their trusted relationship with their supervisor would give them leeway in explaining why contest pursuit is not in the best interest of their longer-term customer

goals. Indeed, these salespeople might feel wide latitude in deciding whether to pursue contest goals, even when contests are appealing on the surface (possessing attractive and attainable rewards). As one industrial salesperson wrote in the margins of his survey, “we’ve had contests focused on products that don’t fit my customers. In these situations, my boss just tells me ‘look, when the thing (contest) is finished, just don’t have a bird’s egg for your totals’.”

For the achievement need of competitiveness, the moderating effect was consistent across industries and companies. It seems that for highly competitive salespeople, the opportunity to compete and emerge as one of the top performers enhances the Asc to intentions relationship at higher Asc while also tending to override the effects of lower Asc on intentions. Other members of the sales force with less need for winning would tend to rely on their attitudes toward a sales contest to determine their intentions to pursue goals.

Finally, the achievement need of status aspiration had moderating effects on the attitude–intention relationship but only for consumer/commercial sales groups. For those with higher status aspiration, this finding seems associated with the heightened desire that status aspiring salespeople have for performance approval; pursuing and achieving short-term goals puts winners in the spotlight, providing ample opportunity for status. However, paradoxically the second consumer/commercial group showed an opposite effect. For them, the greater the status aspiration the lower is one’s intentions to pursue contest goals when appeal is lower. One intriguing possibility is that in some companies higher status aspiration salespeople might strategically discount sales contests; by asserting that contest pursuit is not aligned with territory goals, these salespeople would be able to avoid negative exposure otherwise associated with failure to win.

Across all analyses, moderating effects were not present for demographic or job-related factors. These findings remind sales managers that presumptions about sales force attitudes, intentions, and effort based purely on factors such as age, education, experience, or income can provide misleading cues, potentially leading to biased assessments/evaluations of sales personnel. There is a broad literature attesting to the harmful consequences of allowing attribution biases to affect assessments; these results lend a further cautionary note regarding reliance on “obvious markers” (demographics) when anticipating and/or evaluating intentions and ensuing effort of personnel.

The industry-level findings present a paradox for sales contest planners. Found here, a wide array of sales groups (consumer/commercial; industrial; health care) can be expected to self-report “really liking” sales contests (albeit industrial less so than their counterparts) and yet only consumer/commercial seems certain to respond strongly to these short-term incentives. Noted earlier, this could be based on conditions particular to consumer/commercial markets, with consumer/commercial salespeople perceiving opportunity for gain with little/no downside in pursuing sales contest goals. Meanwhile, sales contests may be an inappropriate special incentive tool for industrial and health care sales forces.

#### 4. Limitations and directions for further research

Several limitations must be noted. First, the additional participating companies (reported at the end of the Results section) helped validate the consumer/commercial and industrial results only. Also, the additional consumer/commercial results contradicted the status aspiration findings from the initial company. It would be appropriate to extend the study beyond the three firms involved here, providing further validation across industries and to clarify effects of variables on the attitude to intentions relationship. Other limitations include the sample selection process and the possibility of self-selection bias. For sample selection, management at the participating companies controlled list generation and mailing labels. As to self-selection bias, it is possible that salespeople with a greater vested interest in the study tended to respond in greater numbers. However, high response rates ameliorate this concern somewhat. An additional concern emerged with the extensive effort asked of respondents and the effects of fatigue on responses. Even so, several procedures were used to ensure that salespeople would see the purposefulness of their responses (including clear instructions, pretests followed by modifications, and management-provided cover letters encouraging response and stressing the importance of the responses to their firms).

Research is needed in a number of additional directions. First, our study examined only the attitude–intention component of [Murphy and Dacin’s \(1998\)](#) call for research. While this was the next logical step following [Murphy et al. \(2004\)](#), additional components of the call for research remain. Second, although we included a set of variables as proposed by the call for research, additional issues related to the attitude–intention relationship required attention. For instance, the effects of the moderator variables were expected to be more in evidence when Asc is lower. We provided a stringent test of these effects by having salespeople focus on relatively more appealing contests, thereby constraining variability of Asc. It would be useful to assess whether these effects are more pronounced under conditions of much lower appeal. We also need to understand whether sales contests that evoke higher Asc can be associated with lower intentions. Some of the possible reasons for this to occur have been suggested including situations where pursuing the sales contest goals would compel a salesperson to deviate from other more enduring goals or have adverse consequences in serving customers. An additional possibility is when a salesperson feels content with current efforts. Though the industrial and health care groups seem to suggest the possibility of either of the first two, further explication and study is needed.

In sum, it seems that the [Murphy and Dacin](#) model introduced in 1998 has merit insofar as expectations for the attitude–intention relationship and the effects of moderators to this relationship. As [Campbell, Dunnette, Lawler, and Weick \(1970\)](#) aptly comment, models are useful in making predictions to the extent that they specify important variables and the processes by which they influence behavior. Clearly, much more needs to be understood when it comes to the design and implementation of sales contests and we encourage continuing research in this important domain.

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