Accounting for sales loss is important to managing the sales force as well as helping to ensure corporate profitability. Indeed, inaccurate explanations increase the likelihood that subsequent selling efforts will prove ineffective (Dixon, Spiro, and Jamil 2001; Weiner 1985) and may result in additional sales recruiting and development expenses (Jolson 1999). In response, sales researchers have examined how and what kind of attributions salespeople use to account for their losses and how these attributions impact subsequent sales performance. We find, for example, that which attributions are made are subject to the salesperson’s past performance (Kelley 1973), whether or not others were involved in the loss (Teas and McElroy 1986), as well as individual differences among salespeople on a variety of personality traits, including personal efficacy and interpersonal control (Dixon, Spiro, and Forbes 2003). To date, much of the sales attribution research has focused on how salespeople intend to adjust their subsequent behavior (Dixon, Spiro, and Jamil 2001), effort (Sujan 1986), and strategy (Sujan, Sujan, and Bettman 1988; Sujan, Weitz, and Sujan 1988) following some sales outcome. The present study builds on this literature by examining if the perceived impact of the sales loss might determine the type of attributions used by salespeople. In addition to its research relevance, how the impact of a loss drives failure attributions is of practical interest as well. Knowing this, managers may gain further insight on salesperson subsequent effort and performance.

This study begins with a review of Hobfoll’s (1989) conservation of resources (COR) theory. COR provides us with a conceptual basis to identify the type of losses salespeople may experience in a sales failure situation. COR also discusses the role that attributions may play in managing the extent of this resource loss. At this point, we review the sales attribution literature and use it and the previous discussion on COR to develop and propose hypotheses on how the type and degree of sales loss affects salespeople’s accounts of sales failure.

THEORETICAL BACKGROUND

Conservation of Resource Theory

Hobfoll’s COR theory describes how individuals strive to retain, protect, and build resources that they value. Four types of resources are identified: (1) objects (i.e., intrinsic in nature, such as a house that may provide shelter and status), (2) energies (i.e., extrinsic in that they—e.g., time, money—provide the means to acquire other resources), (3) personal characteristics (i.e., traits such as self-mastery provide stress resistance and thus help gather or conserve resources), and (4) conditions (i.e., valued states such as marriage, tenure, and seniority that may serve as a basis to hold or acquire other resources). COR holds that individuals experience stress when some environmental circumstance signals the potential or actual net loss of these resources. Alternatively, stress may be experienced when an individual’s investment of resources does not yield any net resource gain.

In the face of such losses, COR holds that individuals may try to replace or reappraise what has been lost. Replacement...
may be direct (e.g., getting remarried following a divorce), indirect (e.g., spend more time with good friends), or symbolic (e.g., gaining esteem via community service) when replacement is not immediately possible (cf. Schlenker 1987). Alternatively, reappraisal of resources might involve either shifting one’s focus of attention (e.g., seeing resource loss as a challenge instead of a threat) or reevaluating resources (e.g., what was lost really was not that valuable). Because coping strategies may in themselves involve an expenditure of resources, COR holds that individuals will choose how to proceed here by weighing risks and gains for various alternatives. For those individuals lacking resources to employ in order to offset their initial loss, a cascade of further resource losses (loss spirals) is possible.

COR has been applied to a wide range of psychological (e.g., passive and active prosocial coping; Hobfoll and Schrodor 2001), social (e.g., threat of terrorism; Foa et al. 2005), and economic phenomena (e.g., transition of the Russian economy to a market-based system; Shteyn et al. 2003) to examine individuals’ stress reactions and coping responses. More in line with the focus of the present research project, COR has also been applied to the workplace to study how a depletion of resources may result in occupational stress and potential burnout (Hobfoll and Freedy 1993; Hobfoll and Shirom 2001). Keeping with this occupational theme, it is of particular interest here to examine how salespeople may attempt to conserve resources in light of some sales loss. As noted in the earlier discussion, when direct resource replacement is not possible, individuals might reappraise or reexamine losses in order to conserve resources. One means to do so may involve reinterpreting the loss. In a sales situation, assigning attributions may be analogous to interpreting a loss and serve to conserve resources (e.g., blame bad luck for the loss and thus retain one’s sense of self-mastery, a personal characteristics resource). To better understand how attributions may work here, it is necessary to review the research work in the areas of sales attribution and loss.

**Attribution, Sales Loss, and Individual Differences**

Attribution is the process used by individuals to explain why some particular outcome has occurred (Weiner 1985). To understand the attribution process and its possibilities in greater detail, researchers have attempted to develop a typology of attributions as well as to examine their antecedents (Johnston and Kim 1994; Teas and McElroy 1986). Weiner (1979; 1985) suggested that attributions could be categorized along three dimensions—locus of causality, causal stability, and controlability. As such, attributions can be internal or external (oneself or another/environmental factor is the causal agent), stable or unstable (whether the cause persists over time or not), and are either controllable or uncontrollable (under one’s or some other agent’s influence). The type of attribution made by salespeople is important because it can affect subsequent sales effort (e.g., working smarter or harder; Sujan 1986) as well as how they alter their strategy and approach to match the selling environment (Sujan, Sujan, and Bettman 1988; Sujan, Weitz, and Sujan 1988). In terms of antecedents, it appears that attributions are made, in part, by reviewing past performances to determine whether one’s present efforts or some environmental factor caused a given outcome (Kelley 1973).

Teas and McElroy (1986) include these dimensions of attributions and past performance in a conceptual model of salesperson performance and expectancy that has guided research in the area. Given its utility and widespread use, it will be used in the present study. In their model (see Figure 1), attributions (external/internal; stable/unstable) are determined both by individual differences as well as by comparing present and past sales performance. Their work is also noteworthy in that they identify and discuss in detail a select set of attributions and behavioral intentions. Building on their work, Dixon, Spiro, and Jamil (2001) recently developed and tested scales to measure causal attributions and likely behavioral intentions following some sales failure. Attributions included both internal (lack of effort, lack of ability, and incorrect strategy) and external (difficulty of task and luck) causes. These measures have been used to determine how inexperienced salespeople form attributions following a sales loss (Dixon, Spiro, and Forbes 2003) as well as a sales success (Dixon, Forbes, and Schertzer 2005). Results indicate that individual differences may affect both the attribution process and the relationship between attribution and behavioral intentions following some sales loss. Dixon and Schertzer (2005) reported that a salesperson’s optimism and self-efficacy might moderate these relationships. The present study contributes to this line of research by examining the role individual differences might play in how more experienced salespeople form attributions following some loss. Dixon and Schertzer (2005) found that optimistic, efficacious sales recruits were more likely to ascribe sales failures to unstable and internal forces. More seasoned salespeople might make different attributions given that they understand in greater detail where their strengths and weaknesses lie (i.e., more performance-based estimates of self-efficacy) and thus know when to appropriately blame external forces for some sales loss. Moreover, the present study includes a measure of internal locus of control in order to further expand our understanding of the individual differences–attribution relationship.

In addition to individual differences, the present study proposes that the salesperson’s perceived impact of the sales loss might account for some of the differences reported in the attribution process as well. How to begin to characterize type of sales losses is difficult due to the wide range of definitions for sales loss found in the research literature. Morris, LaForge,
and Allen, for example, define sales failure as “a salesperson’s inability over a reasonable period of time to fulfill realistic performance expectations, typically but not always with respect to revenue generation that were established by management in conjunction with the salesperson” (1994, p. 7). Ingram, Schwepker, and Hutson define sales failure as “the inability of the salesperson to consistently meet minimum job standards” (1992, p. 226).

Johnson, Hair, and Boles (1989) further demonstrated this lack of consensus in a study where they asked salespeople to define what constituted a sales failure. Understandably, this approach yielded a wider definition of the concept. They found that failure could be defined as losing a sale, missing quota, being unable to get an account to agree to renegotiate some contract terms, being unsuccessful at setting an appointment to pitch a new account, and so on. Definitions of sales failure here tended to be more short term and used to identify daily setbacks as contrasted with a more long-term view of failure suggested by others. Until some consensus as to what constitutes failure is determined, it is difficult to directly compare results across different sales attribution studies.

In part to consolidate these various perspectives, the present study introduces a new approach to define sales loss in terms of failure impact. Using the COR theory discussed earlier, we define failure impact as a net loss of resources following some sales setback. Furthermore, we operationalize this construct by gauging the salesperson’s perception of his or her inability to meet (personal, career, and financial) goals specifically set to conserve or attain these resources. This definition examines the impact on resources rather than the actual event. Thus, failure impact could range along a continuum from minor (no or few resource losses) to extreme (significant resource losses) following any number of sales setbacks (e.g., losing an account, missing quota, failing to sell premium product upgrades, etc.). According to COR, while some losses are relatively objective (e.g., loss of a $10,000 commission), others depend upon one’s subjective personal appraisal (e.g., losing face after being rebuffed by a favorite but minor sales account). Given the difficulty of defining sales loss noted earlier, failure impact due to this resource loss in the present study will be examined in terms of the salesperson’s subjective appraisal rather than by developing some objective measure of the loss.

**HYPOTHESES**

Conservation of Resources and Attributions for Failure

As noted before, COR theory describes four types of resources that individuals may strive to retain, protect, and build. These resource types would appear to describe the kind of resources salespeople possess and may be placed at risk in some sales loss situations. Resources include objects (e.g., contest prizes) and energies (e.g., commissions, bonuses, etc.) that are often tied directly to sales success or conditions (e.g., promotion) and personal characteristics (e.g., capacity to select and implement correct sales strategies) that may be used as a basis to acquire additional resources. How individuals manage these various resources depends upon whether one perceives that some environmental circumstance poses an actual or potential net...
(resource) loss. When no risk to resources is present, individuals might invest to develop resources (e.g., use professional time to attend sales training or solicit coaching from management) in order to acquire the means to offset the possibility of some future loss. In those situations that result in net loss of resources, individuals will be motivated to replace what has been lost (e.g., find a new buyer) or try to rationalize the loss by engaging in some resource reevaluation (e.g., refocus or reinterpret the sales loss). In sum, individuals manage resources by deciding whether to “spend or conserve” them.

The four resources discussed above differ in terms of the degree to which salespeople may manage (“spend or conserve”) them. A salesperson’s net resource gain in terms of objects, energies, and conditions depends upon how buyers respond to and sales management assesses some sales effort and result. Following a sales failure, salespeople cannot manage these objects because they are not forthcoming (e.g., no commission or promotion or sales prizes are awarded). Salespeople would appear to have more discretion on how they manage the remaining resource—personal characteristics. That is, salespeople can decide whether a sales loss can be accounted for in terms of some personal characteristic (e.g., self-mastery) or not. In a sense, salespeople can “conserve” personal characteristic resources (e.g., I am still masterful) by making external attributions (e.g., the sales loss was due to bad luck). Salespeople can “spend down” a personal characteristic resource by making an internal attribution (e.g., I am less skillful or masterful in this type of selling situation) if they want to invest resources (e.g., seek coaching) to offset future losses. Whether a salesperson makes an internal or external attribution depends upon the sales loss at hand. We would expect that salespeople would make external attributions to account for a sales failure that is perceived to result in a large loss of resources or “high sales impact.” Conversely, salespeople will make an internal attribution to account for sales failures that result in few or minor resource losses (i.e., low failure impact). Therefore, it is hypothesized:

**Hypothesis 1:** Following a loss, the perceived failure impact will affect the type of attributions that salespeople make. Specifically, (a) sales failure impact will be positively associated with external attributions, while (b) sales failure impact will be negatively associated with internal attribution.

**Individual Differences and Sales Attribution**

Dixon and Schertzer (2005) noted that there is much variability in how salespeople interpret sales failure and manage subsequent sales efforts. Their study was one of the first to investigate how individual differences impact attributions and behavioral intentions following a sales loss. Optimism and self-efficacy were included as individual difference measures, given evidence from personality research (e.g., Carver, Scheier, and Weintraub 1989; Gist and Mitchell 1992) that they shape one’s response to challenging situations and negative outcomes. Results indicated that optimistic and self-efficacious salespeople were more likely to internalize sales failure and intend to work harder following some sales loss. Given that their sample was comprised mostly of inexperienced salespeople, it was recommended that results be replicated using more experienced salespeople. The present study does so and also includes a scale of self-efficacy more closely tied to the task of selling as well as a measure of internal locus of control in order to further assess how individual differences may impact attributions.

Regarding self-efficacy, individuals tend to evaluate their performance against goals that they set (Locke and Latham 1990) and, based on their success or failure, develop a sense of self-confidence in their ability to complete future tasks (Stajkovic and Luthans 1998). To this end, Dixon and Schertzer (2005) used a ten-item subscale that measured sales recruits’ perceived control over the nonsocial environment in the area of personal achievement (Paulhus 1983; Paulhus and Van Selst 1990). Dixon, Spiro, and Jamil (2001) used this same measure with experienced salespeople and found that efficacious respondents were more likely to cite stable and external causes as the reasons for some sales failure. To extend their work here, we elected to use a three-item scale of self-efficacy more closely tied to performing sales-specific tasks (Wang and Netemeyer 2002) to see if results depended upon how precisely self-efficacy was defined. Given the similar achievement and confidence content found in both measures, we predict that the results here should be comparable to those reported by Dixon, Spiro, and Jamil (2001). Specifically, it is hypothesized:

**Hypothesis 2:** Following a loss, the salesperson’s level of self-efficacy will be (a) negatively associated with internal attributions and (b) positively associated with external attributions.

Finally, internal locus of control was included as a second individual difference measure. Internal locus of control measures an individual’s perception that they personally control events in their lives (Churchill et al. 2000; Rotter 1966). An internal locus of control measure, rather than external, was used here given that COR theory has a similar internal orientation (i.e., an individual’s tendency to protect and build personal resources that they value). With regard to internal locus of control, Dixon, Spiro, and Jamil (2001) found that salespeople high in this trait made more internal attributions than did salespeople low in interpersonal control. This same measure may provide a benchmark here to assess the strength of the sales failure impact construct and its relationship to attributions. Although there is no theoretical basis to predict which measure (internal locus of control or sales failure
Methods

Attributions

Scales developed by Dixon, Spiro, and Jamil (2001) were used to measure a select set of five (three internal and two external) attributions. These attribution measures consisted of three items where salespeople had to agree or disagree (on a six-point Likert scale) whether a given factor caused the loss. Scale items are reported in the Appendix. The dependent variable of interest here is the internal/external dimension of attribution (internal or external), not any one specific explanation (e.g., lack of effort, bad luck) for a loss. Consequently, composite measures for internal/external attribution were obtained by using the factor scores (saved as regression variables) computed from a factor analysis of the five failure attributions.

Failure Impact

A measure of failure impact was developed for this study. Three of the four resources that individuals strive to conserve under conditions of stress were operationalized in the sales domain by using a three-item scale to measure salesperson conservation of objects, energies, and conditions (i.e., three of the resources described by COR theory). To do this, salespeople indicated whether or not they agreed (on a six-point Likert scale) that the sales loss they were thinking of made it difficult for them to achieve their personal sales (i.e., objects resources), career (i.e., conditions resources), and personal financial goals (i.e., energy resources). These three resources were included here, because they are the ones typically associated with sales success and loss. A factor analysis was run to ensure that these three items loaded onto a single construct (i.e., failure impact). The method and results of this factor analysis are reported in the measure validation section. The items that make up this (failure impact) measure are listed in the Appendix. The factor score for failure impact was saved as a regression variable and using a median split, dummy coded as either low (1) or high (2) in failure impact.

Task Self-Efficacy and Internal Locus of Control

A three-item (six-point Likert) scale developed by Wang and Netemeyer (2002) that measured a salesperson’s self-reported confidence to succeed in the task of selling was used to measure self-efficacy. Internal locus of control, using an abbreviated three-item (six-point Likert) scale developed by Lumpkin and Hunt (1989) measured the degree to which individuals feel that they control what happens to them. The items that make up these (personal characteristic) measures are listed in the Appendix. These personal characteristic items were factor analyzed to ensure that they represent two distinct constructs.
The method and results of this factor analysis are reported in the Analysis and Results section.

Control Variables

Three demographic control variables were operationalized and included to fully specify the model. Age was measured in years by a single questionnaire item asking participants to specify their age. Selling experience was a single-item measure whereby participants were asked “how many years of total selling experience do you have?” Finally, participants were asked to specify their gender. Each of these variables was included in both internal and external attribution models.

ANALYSIS AND RESULTS

Measure Validation

Several methods were used to demonstrate that the measures used are valid and reliable representations of the constructs in our study. To begin this investigation, an exploratory factor analysis was performed on the nine independent construct items to check for the existence of three unique factors. Specifically, a factor reduction using principle component analysis with varimax rotation was run on the three failure impact items, three self-efficacy items, and three internal locus of control items. The result yielded a three-factor solution explaining 77.46 percent of the total variance. The three self-efficacy items loaded on to the first factor, explaining 31.98 percent of variance. Factor two accounted for 25.77 percent of the variance by the three failure impact items, and the three internal locus of control items loaded on to the third factor explaining the remaining 19.72 percent of the variance. Table 1 presents the findings of this exploratory factor analysis. Relative to the dependent constructs, internal and external attribution, we felt that an exploratory factor reduction was unnecessary due to the rigorous measurement testing of these published scales from their use in previous attribution studies (Dixon and Schertzer 2005; Dixon, Forbes, and Schertzer 2005; Dixon, Spiro, and Forbes 2003; Dixon, Spiro, and Jamil 2001).

To investigate the fit properties of the measurement model, a confirmatory factor analysis (CFA) was conducted using AMOS 4.0. The results suggested an acceptable fit ($\chi^2 = 30.9$, degrees of freedom [df] = 24, $p = 0.16$; root mean square error of approximation [RMSEA] = 0.05, CI,95% = 0.01 to 0.10; goodness-of-fit index [GFI] = 0.95; adjusted goodness-of-fit index [AGFI] = 0.90; comparative fit index [CFI] = 0.99; normed fit index [NFI] = 0.95; relative fit index [RFI] = 0.93). Convergent validity of the independent construct measures was confirmed by computing the average variance extracted (AVE). These values are reported among the descriptive statistics in Table 2. The range of values is 0.57 (internal locus of control) to 0.89 (self-efficacy). According to Fornell and Larcker (1981), convergent validity is judged to be adequate when AVE equals or exceeds 0.50. Based on this, our reported AVEs are sufficient. In addition, all measurement items had significant loadings on their corresponding constructs. This, combined with the acceptable composite reliability measures, indicates convergent validity (Fornell and Larcker 1981).

To test discriminant validity, we conducted an analysis to ensure that each item is associated with only one construct—that is, no item loaded higher on another construct

<table>
<thead>
<tr>
<th>Table 1: Exploratory Factor Analysis for Independent Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observed Variable/Items</strong></td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Attainment of Personal Goals</td>
</tr>
<tr>
<td>Attainment of Career Goals</td>
</tr>
<tr>
<td>Attainment of Financial Goals</td>
</tr>
<tr>
<td>Confidence in Ability to Perform Job</td>
</tr>
<tr>
<td>Capable at Task of Selling</td>
</tr>
<tr>
<td>Capable to Perform This Job</td>
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</tbody>
</table>

Note: Extraction method: varimax rotation.
Table 2
Means, Standard Deviations, and Correlations Among Variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lack of Effort</td>
<td>(0.76)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Lack of Ability</td>
<td>0.562***</td>
<td>(0.80)</td>
<td></td>
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<td></td>
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<tr>
<td>3. Incorrect Strategy</td>
<td>0.473***</td>
<td>0.493***</td>
<td>(0.91)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Difficult Sale</td>
<td>−0.037</td>
<td>0.088</td>
<td>−0.151</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>5. Bad Luck</td>
<td>−0.058</td>
<td>−0.028</td>
<td>−0.315***</td>
<td>0.238*</td>
<td>(0.87)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6. Failure Impact</td>
<td>0.108</td>
<td>0.219*</td>
<td>0.051</td>
<td>0.198*</td>
<td>0.210*</td>
<td>(0.83)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7. Self-Efficacy</td>
<td>−0.284***</td>
<td>−0.242*</td>
<td>−0.107</td>
<td>0.126</td>
<td>0.038</td>
<td>−0.031</td>
<td>(0.96)</td>
<td></td>
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<tr>
<td>8. Internal Locus of Control</td>
<td>0.170</td>
<td>0.159</td>
<td>0.304***</td>
<td>−0.045</td>
<td>−0.168</td>
<td>−0.070</td>
<td>0.338***</td>
<td>(0.76)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Age</td>
<td>0.149</td>
<td>−0.041</td>
<td>0.031</td>
<td>0.016</td>
<td>−0.111</td>
<td>0.089</td>
<td>0.039</td>
<td>−0.019</td>
<td></td>
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<tr>
<td>10. Sales Experience</td>
<td>0.143</td>
<td>−0.033</td>
<td>−0.011</td>
<td>0.026</td>
<td>−0.003</td>
<td>0.139</td>
<td>0.173</td>
<td>−0.073</td>
<td>0.756***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Gender</td>
<td>0.097</td>
<td>0.103</td>
<td>0.222*</td>
<td>0.095</td>
<td>0.056</td>
<td>0.029</td>
<td>0.062</td>
<td>−0.030</td>
<td>0.092</td>
<td>0.225*</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.25</td>
<td>2.38</td>
<td>3.15</td>
<td>3.67</td>
<td>2.59</td>
<td>2.52</td>
<td>5.32</td>
<td>4.83</td>
<td>44.38</td>
<td>17.91</td>
<td>1.75</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.08</td>
<td>1.12</td>
<td>1.37</td>
<td>1.20</td>
<td>1.29</td>
<td>1.31</td>
<td>0.84</td>
<td>0.69</td>
<td>9.67</td>
<td>9.29</td>
<td>0.44</td>
</tr>
<tr>
<td>Average Variance Extracted</td>
<td>0.65</td>
<td>0.89</td>
<td>0.57</td>
<td></td>
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</table>

Notes: N = 112. Cronbach’s alpha reliability scores are reported in parentheses on the diagonal. Correlation is significant at * p < 0.05 level; ** p < 0.01 level.
than it did on the construct it intends to measure (Fornell and Larcker 1981; Green, Salkind, and Akey 2000). In the first step of this analysis, the correlations were computed for each of the independent construct items (three failure impact items, three self-efficacy items, three internal locus of control items). In the second step, we compared these item correlations with the correlation for the total (summed) score for each of the three individual construct scales. Discriminant validity is determined where a single item has a higher correlation to its own scale compared to that item’s correlation to either of the other two scales. All single items’ correlation (to its own scale) exceeded that of any of the other two scales, thus demonstrating discriminant validity of the three independent constructs. The results of this analysis are illustrated in Table 3.

To ensure against distortion due to a nonnormal distribution, all variables were tested for excessive skewness and kurtosis. This was done by calculating the skewness and kurtosis indices from SPSS, converting them to z-scores, and comparing the result to ±2.58 for a 0.01 level test (Avlonitis and Panagopoulos 2006). All skewness values fell into acceptable ranges. The lowest was self-efficacy (−2.43), and the highest was failure impact (0.68). A similar test of kurtosis revealed that the lowest value, failure impact (0.68), was within the acceptable range; however, the highest value, self-efficacy (8.25), had excessive kurtosis. This was handled by transforming self-efficacy into its natural log form. Upon doing so, the models were rerun using the transformed variable. The model improvements were not significant (R² change of 0.003 for the internal attribution model and R² change of 0.001 for the external attribution model). Therefore, excessive kurtosis of the self-efficacy variable did not seem to pose a major problem in reporting the results of the original regression models. Based on this as well as the checks for reliability and validity discussed, we conclude that the measures used in our study appropriately represent the constructs of interest.

### Model and Hypothesis Results

Descriptive statistics (means, standard deviations, correlations among variables, and reliability estimates) are reported in Table 2. Multicollinearity between the independent variables was inconsequential, as the largest variance inflation factor was 2.70. According to Hair et al. (1998, p. 221), values less than 10.0 are acceptable. Furthermore, the Cronbach’s alpha for each multiple item measure is above acceptable levels (Nunnally 1978).

Two separate ordinary least squares (OLS) regression models were run in order to determine the effects of salesperson demographic covariates (age, years of selling experience, gender), failure impact, task self-efficacy, and internal locus of control on both dependent variables, internal and external attributions. These results are reported in Table 4.

Overall, both regression models were significant (internal attributions: F-value = 6.206, p < 0.01; external attributions: F-value = 2.314, p < 0.05). The internal attribution model explained substantially more variance (adjusted R² = 0.223) than the external attribution model (adjusted R² = 0.067). Examining the beta weights for both regression models tested individual hypotheses. Partial support for H1 was found. This is based on support for H1a (failure impact is positively associated with internal attributions; β = 0.277, t = 2.976, p < 0.01) and support (but in the wrong direction) for H1b (failure impact turns out to be positively associated with internal attributions; β = 0.222, t = 2.610, p < 0.05). Partial support for H2 was also found. This is based on support for H2a (self-efficacy is negatively associated with internal attributions; β = −0.416, t = −4.402, p < 0.01). Inconsistent with H2b, those salespeople who saw themselves as capable (i.e., high self-efficacy) were not inclined to make external attributions (e.g., blame others) to account for some sale loss (β = 0.075, t = 0.728). Finally, H3 was supported. Salesperson internal locus of control was

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Discriminant Validity Results</th>
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<tbody>
<tr>
<td><strong>Observed Variable/Items</strong></td>
<td><strong>Factor 1</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Self-Efficacy</strong></td>
</tr>
<tr>
<td>Attainment of Personal Goals</td>
<td>−0.07</td>
</tr>
<tr>
<td>Attainment of Career Goals</td>
<td>−0.01</td>
</tr>
<tr>
<td>Attainment of Financial Goals</td>
<td>−0.01</td>
</tr>
<tr>
<td>Confidence in Ability to Perform Job</td>
<td>0.91</td>
</tr>
<tr>
<td>Capable at Task of Selling</td>
<td>0.94</td>
</tr>
<tr>
<td>Capable to Perform This Job</td>
<td>0.90</td>
</tr>
<tr>
<td>What Happens Is My Own Doing</td>
<td>0.34</td>
</tr>
<tr>
<td>Getting . . . Depends on Ability, Not Luck</td>
<td>0.33</td>
</tr>
<tr>
<td>I Am Certain I Can Make Plans Work</td>
<td>0.32</td>
</tr>
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*Note: Results illustrate correlations of each item with its own scale (bold) relative to the other two scales.*
positively associated with internal attributions ($\beta = 0.410$, $t = 4.421$, $p < 0.01$). Summaries of the hypotheses and findings are provided in Table 5.

**DISCUSSION AND IMPLICATIONS**

Hobfoll’s COR theory was used to predict how salespeople account for sales setbacks that varied in terms of resource loss (sales failure impact). Partial support was found. Specifically, where sales failure impact was high (i.e., a number of personal sales, career, and financial goals were not met), salespeople cited external factors as the cause. According to COR theory, such salespeople could be viewed as attempting to conserve resources (by not holding themselves accountable and thus preserving personal characteristic resources) in the face of substantial losses (i.e., unmet goals). The converse was not true, however. Salespeople did not make internal attributions when seemingly they could “afford” to do so. That is, when resources losses were minimal, they were not inclined to hold themselves accountable (i.e., make internal attributions) and perhaps look for ways to develop resources (e.g., engage in professional development) in order to offset potential future losses as predicted by COR theory. In fact, internal attributions were associated with high rather than low sales impact. In the face of substantial losses, salespeople tended to make both internal and external attributions. Upon closer inspection, it appears that only one internal attribution, ability (not effort or chosen strategy), was significantly associated with high sales impact. One explanation might be found in the sample employed in the present study. Our highly seasoned salespeople (17 years direct sales experience on average) might be sufficiently self-assured to work and bid on relatively high (resource) yield, low probability “long shot” sales opportunities. Such losses could be explained in terms of ability (or lack thereof) where salespeople knew that they were working outside of their skill set.

The results on self-efficacy can be interpreted along similar lines as well. We found that salespeople who were low in self-efficacy made internal attributions to account for sales losses. They might have “known” that they were not up to the specific sales task at hand and attributed the loss to themselves accordingly. However, the expected positive relationship between self-efficacy and external attributions was not found. One explanation for this is that these experienced salespeople high in mastery or confidence levels (i.e., self-efficacy) may be less likely to focus on excuse making when a loss occurs. Instead, the focus may be to merely move on without making attribution. This is consistent with COR theory in that a more mature/experienced individual may realize that they can recover lost resources (financial, job status, colleague respect) by focusing more on future efforts rather than by reflecting on the past. Seemingly, the results reported here on internal locus of control support this tendency. We find that individuals who score high on internal locus of control did make internal attributions.

Given these results, how well does COR help explain the sales attribution process? By comparison, both individual difference measures, self-efficacy and internal locus of control,
are better predictors of attributions than sales failure impact, and by implication, salespeople's efforts to conserve resources. COR theory may be more useful to account for attributions in those sales situations where salespeople encounter resource management problems. Losing resources via some sales failure should be more important when the salesperson has few resources to begin with or when it is unlikely that additional resources could be readily earned by selling to other accounts. These conditions are found in several sales contexts. Limited resources are the norm early in one's sales career as well as later on for salespeople who are only marginally successful in the field. Direct replacement of lost resources is unlikely in those industries where competitive intensity is great, sales cycles are long, or switching costs is prohibitive. It is unknown to what degree the sample in the present study faced resource management problems such as those described here. An ad hoc analysis suggested that our sample did not experience a large loss of resources (most respondents moderately disagreed that the loss would make it difficult to achieve personal sales, career, or financial goals) and thus may not have experienced the kind of resource management problems for which COR theory might be more applicable. Despite this condition, moderate support for the theory was found, permitting us to draw out some preliminary sales management implications.

In the role of coach, a sales manager must help salespeople diagnose and correct selling deficiencies. Therefore, an accurate and objective account for a sales loss becomes paramount. From a diagnostic point of view, external attributions can be viewed as providing little value to help salespeople improve. Understanding that an external attribution is likely to result from a perceived high impact loss, managers can play a role in tempering the salesperson's anxiety stemming from the failure. One way to do this is to openly discuss the relative influence of this one loss toward the attainment of the salesperson's long-term goal(s). This might reduce salesperson anxiety and foster a more honest assessment of why the loss actually occurred (revealing or confirming the true attribution). In sum, by viewing the failure impact of a lost sale relative to the resources salespeople stand to lose, the type of attributions used to define the loss may be better understood by managers.

**LIMITATIONS AND RESEARCH RECOMMENDATIONS**

While this study does introduce a new way to conceptualize sales loss and ensuing attributions, the scale used to measure COR resources may have accounted for the modest support found here. The single-factor scale included only one item for three of the four resources outlined in the COR theory. Multiple measures of each resource might yield a different factor solution and allow us to explore if different resource losses give rise to different attributions. Furthermore, exploring gender differences would make for an interesting addition to our study; however, we were limited by our predominantly male (75 percent) sample. Moreover, some means to identify which personal characteristics constitute resources for salespeople (as opposed to individual differences as found in the Teas and McElroy 1986 model) needs to be determined. Until then, a complete test of the COR model is not possible. Still, as these measurement issues are resolved, the validity of the COR model to guide sales attribution research needs to be gauged relative to other frameworks.

As researchers evaluate COR theory and its application to the sales literature, it is important to keep in mind that COR theory is a personal stress model. It holds that following some net resource loss, individuals are active and motivated to retain, protect, and build resources that they value. For the present study, salespeople were motivated to make attributions to account for resource losses. We do not know, however, how stressed our sample was during these events. Lazarus and Folkman (1984) noted that individuals often employ both problem-focused and emotion-focused responses following some loss. In addition to problem-focused responses, such as making attributions, our salespeople may have employed emotion-focused efforts as well. Goodwin, Mayo, and Hill (1997) identified a number of coping strategies, including engaging

<table>
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<tr>
<th>Hypothesis</th>
<th>Findings</th>
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<tr>
<td>H1: Following a loss, the perceived failure impact will affect the type of</td>
<td></td>
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<tr>
<td>attributions that salespeople make. Specifically,</td>
<td></td>
</tr>
<tr>
<td>(a) sales failure impact will be positively associated with external</td>
<td>(a) Supported</td>
</tr>
<tr>
<td>attributions.</td>
<td></td>
</tr>
<tr>
<td>(b) sales failure impact will be negatively associated with internal</td>
<td>(b) Not supported</td>
</tr>
<tr>
<td>attributions.</td>
<td></td>
</tr>
<tr>
<td>H2: Following a loss, the salesperson's level of self-efficacy will be</td>
<td></td>
</tr>
<tr>
<td>(a) negatively associated with internal attributions.</td>
<td>(a) Supported</td>
</tr>
<tr>
<td>(b) positively associated with external attributions.</td>
<td>(b) Not supported</td>
</tr>
<tr>
<td>H3: Following a loss, the salesperson's level of internal locus of control</td>
<td></td>
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<tr>
<td>will be positively associated with internal attributions.</td>
<td>Supported</td>
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in physical exercise, temporarily avoiding the sales situation, and seeking social support in order to cope with the loss of a major account. By considering both problem- and emotion-focused responses following some sales loss, some idea of how attributions act in concert with other coping efforts might be determined. Doing so would provide a more comprehensive picture of how salespeople respond to sales setbacks.

REFERENCES


APPENDIX
Sales Transaction Outcome Questionnaire

A six-point (forced choice) Likert scale is used to respond to the following statements (1 = strongly disagree to 6 = strongly agree).

Questions Measuring Lack of Effort Attribution
1. I lost this sale because I did not work hard enough.
2. I did not put in the necessary time to make this sale.
3. I did not put forth the effort needed to make this sale.

Questions Measuring Lack of Ability Attribution
4. I need to improve my skills to be successful.
5. I need more skill and knowledge to be successful.
6. I need to increase my knowledge in order to be successful.

Questions Measuring “Incorrect Strategy” Attribution
7. I used the wrong selling strategy for this type of selling situation.
8. I picked the wrong strategy for this type of client.
9. My sales strategy was incorrect for this type of client.

Questions Measuring “Difficulty of Sale” Attribution
10. This type of sales call is difficult for everyone.
11. Everyone finds this to be a tough selling situation.
12. This was a difficult selling situation.

Questions Measuring “Bad Luck” Attribution
13. This situation was just an unlucky one.
14. I lost this sale because it was just an unlucky break.
15. I lost this sale because it was just bad luck.

Questions Measuring Failure Impact
16. This particular loss will make it difficult to achieve my personal sales goals (i.e., sales awards, top ranking, etc).
17. This particular loss will make it difficult to achieve my career goals (i.e., promotion, advancement, etc.).
18. This particular loss will make it difficult to achieve my personal financial goals (i.e., commission, bonus, raises, etc.).

Questions Measuring Task Self-Efficacy
19. Overall, I am confident in my ability to perform my job well.
20. I feel that I am very capable at the task of selling.
21. I feel that I have the capabilities to successfully perform this job.

Questions Measuring Internal Locus of Control
22. What happens is my own doing.
23. Getting people to do the right things depends on ability, not luck.
24. When I make plans, I am certain I can make them work.