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COMPARING TWO ATTRIBUTIONAL MODELS OF JOB PERFORMANCE IN
RETAIL SALES: A FIELD STUDY

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ABSTRACT

Research investigating attributional style and job performance among sales staff has been limited by its focus on specific sales roles: notably selling insurance by telephone. Important questions therefore remain regarding the mechanism by which attributions influence job performance in sales roles more generally. This paper describes a field study comparing two attributional models of job performance: i) a learned helplessness [LH] model, and ii) an achievement motivation [AM] model. Managers' performance ratings were collected for 452 retail sales assistants who completed a job specific attribution questionnaire and a work satisfaction questionnaire. Results indicate that sales assistants who made more internal-controllable attributions for positive outcomes received higher performance ratings ($r = .20, p < .01$) and were more satisfied in their work ($r = .12, p < .05$). The findings provide support for an AM model of job performance among retail sales assistants. They suggest that more successful sales assistants proactively manage their environment in order to create opportunities for successful interactions with customers.

INTRODUCTION

Customer service and sales performance have been identified as key differentiators between successful and less successful retail organizations (Cravens, Ingram, LaForge & Young, 1993; Peters & Waterman, 1982; Stewart, 1996). Central to this performance are the daily efforts of individual sales assistants who strive to influence customers, provide customer care and achieve sales. Yet despite the importance of these efforts, individual differences capable of predicting excellent sales performance or customer service have proven notoriously elusive (Barrick & Mount, 1991; Barrick, Mount & Strauss, 1993; Stewart, 1996; Vinchur, Schippmann, Switzer & Roth, 1998; Schulman, 1999). One area of research that holds considerable potential for our understanding of performance predictors in this area, however, takes a socio-cognitive perspective. It predicts that individual differences in the way sales assistants typically explain customer interactions influence the way in which they respond to such situations. This paper compares two attributional models of job performance in terms of their effectiveness at predicting job performance among sales staff.

According to attribution theorists, the way in which individuals explain events, their own behaviour and the behaviour of others is an important determinant of how they choose to respond (Hewstone, 1989). Furthermore, there is evidence that individuals demonstrate relatively stable differences in the way that they typically explain such events; these differences have been described as attributional (Abramson, Seligman & Teasdale, 1978; Peterson, Semmel, VonBaeyer, Abramson, Metalsky & Seligman, 1982). Whilst the workplace has proven a popular focus for attribution research in general (e.g., Green & Mitchell, 1979; Heaven, 1994; Heneman, Greenberger & Anonyuo, 1989; Kipnis, Schmidt, Price & Stitt, 1981; Silvester & Chapman, 1997; Silvester, Anderson & Patterson, 1999), relatively little attention has been paid to the possibility that attributional style might predict job performance (Ashforth & Fugate, 2000; Furnham, Brewin & O'Kelly, 1994; Furnham, Sadka & Brewin, 1992; Schulman, 1999). Two notable exceptions are studies by Seligman & Schulman (1986) and Corr & Gray (1996), both of which found a

significant relationship between attributional style and sales performance among male life insurance sales agents.

In their study of attributions made by newly recruited US male insurance sales agents (N=94) Seligman and Schulman (1986) found that individuals who sold less insurance in their first and second year were significantly more likely to attribute negative events to internal, stable and global causes. In comparison, successful sales agents tended to attribute negative outcomes to external, unstable and specific causes. A second prospective part of the study concerned newly recruited sales agents (N = 104) who completed the Attributional Style Questionnaire (ASQ: Peterson et al., 1982) on entry to the organization. Individuals who attributed positive outcomes to more internal, stable and global causes, and negative events to external, unstable and specific causes, achieved a greater volume of sales and demonstrated a significantly higher likelihood of staying with the company during their second year. In a replication of this study with a matched group of UK male insurance sales agents (N=130) Corr and Gray (1996) also found a significant relationship between attributional style (as measured by the ASQ) and sales outcomes. However, contrary to Seligman and Schulman's findings, attributions for positive rather than negative outcomes were found to be better predictors of sales performance.

Although both studies indicate a relationship between attributional style and sales performance, questions remain concerning the mechanism by which attributions influence successful sales outcomes. Seligman and Schulman (1986) explain their findings in terms of a 'learned helplessness' [LH] model of attributions and performance. They argue that successful sales agents typically externalise the causes of failure (e.g., I didn't make the sale because the client was busy and didn't have time to talk). This attributional style renders them more successful because it acts a buffer against feelings of helplessness and poor self-esteem, making them less likely to give-up when they encounter failures. In contrast, less successful sales people typically attribute their failures to internal, stable and global causes (e.g., I didn't make the sale because I'm not very pushy). According to Seligman and Schulman individuals who possess this attributional style, and who encounter persistent failures,

are more likely to experience increased feelings of helplessness, lowered self-esteem, de-motivation and reduced performance levels. They are also more likely to leave the organization.

However, several criticisms can be leveled at the LH model. Intuitively, the model's explanation of poor sales performance among insurance sales agents makes sense. Not only are these individuals required to 'cold call' prospective clients by telephone, they must tolerate very high levels of failure compared with actual success. Therefore externalizing failure in this specific role might constitute a very useful form of self-protection from the potentially de-motivating effects of high levels of negative feedback. But in the case of retail sales, where negative feedback is potentially less immediate and powerful, it is less clear that high performance will be associated with individuals who habitually externalize failure. It can be argued, for example, that individuals who consistently externalise causes of failure are less likely to learn from their experiences, and improve future performance, because they do not believe that they can influence outcomes (Silvester, Anderson-Gough, Anderson & Mohamed, 2002). There has been no test of whether the LH model predicts performance in sales roles that do not involve 'cold-calling' customers, or entail such high levels of rejection and failure. Finally, it is unclear how the LH model can account for the discrepancy between Corr and Gray's UK findings and Seligman and Schulman's US findings. In the former study attributions for positive events predicted sales performance better than attributions for negative events. In the latter, attributions for negative outcomes predicted better than those for positive outcomes.

An alternative model of attributional style and sales performance can be derived from Weiner's (1986) work on attributions and motivation. Weiner (1986) considers three causal dimensions (locus, stability, and controllability) to be important determinants of affect and motivation in achievement situations. Although the model, described here as the 'achievement motivation' [AM] model, has not been tested with respect to sales situations, Sujana (1986) makes a number of predictions specific to the sales role. He argues that a sales person, who attributes a failed sale to an internal yet unstable and controllable cause (e.g., effort), is unlikely to give up in

the face of similar future situations because they believe themselves able to influence the outcome through increased effort, or by changing their strategy. This contrasts with the LH model that predicts that individuals who externalise causes of failed sales outcomes are likely to be more successful. An important distinction between Seligman and Schulman's (1986) LH model and the AM model is therefore the inclusion of perceived controllability as a causal dimension.

According to Weiner (1986) an internal cause can be uncontrollable (e.g., personality or intelligence) or controllable (e.g., effort, or choice of strategy). Thus, in the case of high levels of sales performance, the AM model predicts that a successful sales person is more likely to attribute both successful and unsuccessful sales to internal and controllable causes. These individuals are more likely to be proactive in approaching customers and initiating sales because they believe that they can make a difference to the sales outcome (e.g., she bought the lipstick because I introduced her to our new range). Moreover, individuals who attribute unsuccessful sales to internal-controllable causes (e.g., he did not buy the tie because I was too pushy) are unlikely to experience reduced motivation, because they believe they have the ability to deal more effectively with future situations by altering their strategy or behaviour.

Although the LH and AM do not differ substantially in terms of predicting good performance (both view more successful sales people as those who attribute positive outcomes internally), an implicit assumption of the LH model is that good performance results, at least in part, from an individual's ability to deflect the potentially debilitating effects of negative feedback. Consequently, the main difference between the two models concerns how successful and unsuccessful sales people explain negative outcomes. More specifically, the AM model predicts that is less successful sales people who typically attribute negative sales outcomes to external-uncontrollable causes, such as what the customer does or wants (e.g., he did not buy anything because the shop had not got the shampoo he was looking for). These individuals are viewed as being less likely to strive for success because they perceive no relationship between their own efforts and the sales outcome. This prediction is therefore in direct contradiction with that of the LH model, which views

more successful performers as being most likely to externalize failure. Whereas the LH model views poor performance as resulting from a deterioration of effort following failure, the AM model predicts that less successful sales people will initiate fewer sales interactions with customers in the first place. Ironically therefore, according to the AM model, poor performers in a retail context may actually experience less failure than high performers – by making less effort to initiate contact and waiting for customers to approach them.

Although the AM model has not been tested in the sales context, researchers have explored the role of attributions in situations involving interpersonal persuasion. For example, Anderson (1983) asked participants to take part in a blood drive task where they were expected to contact other students via the telephone and persuade them to donate blood. He found that individuals who made strategy-effort (internal-controllable) attributions expected more success, displayed higher levels of motivation and performed better at the task than did individuals who made ability-trait (internal-uncontrollable) attributions. On a similar task, Anderson and Jennings (1980) found that individuals who were led to attribute initial failures to ineffective strategies (an internal-controllable cause) demonstrated significantly more improvement with practice than did subjects who were led to attribute the initial failure to low ability. Jennings (1979) also found that subjects who made strategy attributions (internal-controllable) for initial failures changed their strategies more often and improved the quality of their persuasive appeals significantly more than subjects who attributed initial failures to lack of ability.

Consequently a broad aim of this study was to test two attributional models of sales performance, the LH model (Seligman & Schulman, 1986) and the AM model based on work by Weiner (1986), in terms of their effectiveness at predicting performance among retail sales assistants. In the sales assistant role, which involves face-to-face contact with customers and requires employees to approach customers, provide assistance and achieve sales, we predicted that the AM model would constitute a better predictor of performance. More specifically, we predicted that sales assistants who attribute successful sales outcomes to internal-controllable causes

would receive higher job performance ratings from their line managers than sales assistants who attribute them to external-uncontrollable causes (hypothesis one). It was also predicted that sales assistants who attribute unsuccessful sales outcomes to internal-controllable causes would receive higher job performance ratings from their line managers than sales assistants who attribute them to external-uncontrollable causes (hypothesis two). A third contrary hypothesis, based on the LH model, predicted that sales assistants who attribute unsuccessful sales outcomes to external-uncontrollable causes would receive higher ratings for 'sales performance' from their line managers (hypothesis three).

METHOD

Research Context

The study was conducted in the UK division of a multinational retail organization where the second author was employed as the occupational psychologist responsible for corporate selection and assessment procedures. The company employs over 55,000 sales assistants in 1200 stores throughout the UK and demonstrates the second highest level of customer traffic for any retail outlet in the country. The organization's primary retail markets are: pharmaceuticals, cosmetics, personal health-care, household goods and clothing. Importantly, customer service is viewed by the organization as a key factor in ensuring the generation of repeat sales and maintenance of successful long-term relationships between customers and the company. A recent job analysis of the sales assistant role had identified 'sales performance' and 'customer service' as the two core competencies central to successful job performance. The organization was particularly interested in developing procedures for identifying those individuals with a propensity for achieving high sales and excellent customer service.

Procedure

A decision was taken to develop an attribution questionnaire specific to the retail sales role in this organization. Although initial consideration was given to using a modification of the ASQ or the Occupational Attributional Style Questionnaire (OASQ: Furnham, Sadka & Brewin, 1992), both were considered unsuitable for a number of reasons. First, the ASQ and OASQ are both relatively complex and difficult to complete. Each presents respondents with six positive and six negative hypothetical scenarios, which in the case of the OASQ are work-related (e.g., you receive a promotion). Respondents are then required to write down what they consider to be the most likely cause of each of the scenarios, and then rate the cause on a series of causal dimensions. Previous research has indicated that such questionnaires can be difficult to complete for non-graduate level populations (e.g., Stratton & Swaffer, 1988), consequently an initial pilot investigation was conducted with ten sales assistants from the organization asking them to complete and comment on the ASQ questionnaire in the presence of one of the authors. Sales assistants' comments reflected their difficulty in a) identifying a single cause for a hypothetical outcome and, b) understanding precisely what was meant in rating the 'internal-external', 'global-specific', and 'stable-unstable' dimensions. Consequently, a decision was made to develop a job-specific questionnaire requiring sales assistants to judge the most likely causes of successful and unsuccessful customer interactions. A job-specific questionnaire has the advantages of maximizing the face validity and usability of the questionnaire, and permits a more rigorous test of the hypotheses.

The development of a job-specific attribution questionnaire involved three stages: (1) semi-structured critical incident interviews with job incumbents to elicit realistic customer scenarios and causal attributions for use in developing items, (2) administration of the pilot questionnaire to a convenience sample of 500 sales assistants employed by the organization, followed by item and factor analysis to examine the psychometric properties of the questionnaire, (3) collection of job performance data for sales assistants from their immediate line managers which was then used to test the hypotheses.

Stage 1: Item generation for a job-specific attribution questionnaire

Critical incident interviews (Flanagan, 1954) lasting approximately 40 minutes were conducted with ten good, ten average and ten poor sales assistants from five stores located in different geographical regions across the UK. This was to ensure that the final questionnaire reflected different retail and economic contexts, including areas of high and low employment, urban and regional store locations, and large and small stores. Store managers nominated employees for interview on the basis of performance records. All employees were informed that the purpose of the interviews were to explore the types of situations involving customers that sales assistants encountered during their work. They were also assured that the interviews were confidential and that no information concerning individual employees would be returned to the organization.

Interviews were audio-recorded and subsequently transcribed. They followed the same semi-structured format allowing interviewees to expand upon issues they considered to be important. Sales assistants were asked to recall and describe previous sales and customer service situations that they had been involved in that had gone a) well and b) badly, with the order of questions randomized to avoid order effects. In each case they were also asked to explain why they thought the situation had gone successfully or unsuccessfully.

Descriptions of customer service and sales interactions were identified from transcripts and any attributions for these incidents that were produced by sales assistants were extracted and coded using the Leeds Attributional Coding System (LACS: Munton, Silvester, Stratton and Hanks, 1999). Sales assistants had no difficulty recounting situations and were able to provide spontaneous causal accounts of the incidents without prompts from the interviewer. These incidents and causal attributions were used to develop a pilot attribution questionnaire that required respondents to imagine themselves as the sales assistant in each of 40 scenarios. For example: A customer comes into the store that is about to go on holiday. She is going somewhere hot and does not know what to take with her. You talk to her about difference suntan creams and other holiday products. She leaves having bought two

bottles of suntan cream, a bikini and some sunglasses. Respondents were asked to judge what they considered to be the most likely cause of this outcome (Why do you think the customer bought these items?) by choosing between two causes that were derived from interviews. In each case these involved an internal-controllable [IC] cause and an external-uncontrollable [EU], presented in a randomized order to counter any possible order effects:

| | | | | | | |
|-------------------------------|---|---|---|---|---|-----------------------------------|
| <u>The customer was going</u> | 1 | 2 | 3 | 4 | 5 | <u>You talked about different</u> |
| <u>on holiday.</u> [EU] | | | | | | <u>holiday products.</u> [IC] |

Respondents indicated on a 1-5 scale which of the causes they believed was most likely to have produced the outcome: ‘1’ indicates that they considered the first cause to be entirely responsible for the outcome and ‘5’ that they considered the second cause to be entirely responsible. Respondents were asked to use ‘3’ if they judged the outcome most likely to have been caused equally by the two causes, and ‘4’ or ‘2’ if they judged the outcome to be mostly, but not entirely caused by one or other of the causes.

The pilot questionnaire comprised of 40 scenarios and 80 items, 20 scenarios (40 items) related to customer care [CC] outcomes and 20 scenarios (40 items) to sales outcomes [SP]. These were balanced for positive and negative outcomes. Each item involved two possible causes for a scenario, an internal-controllable cause [IC] and an external-uncontrollable cause [EU]. The following example illustrates a negative customer care item: A lady comes in for her photographs, but you discover that the laboratory has lost her negatives. She becomes very angry. You try to find out what happened, but in the end she wants to speak to you manager. Why do you think she wanted to speak to your manager?

| | | | | | | |
|------------------------------|---|---|---|---|---|--------------------------------|
| <u>You did not apologize</u> | 1 | 2 | 3 | 4 | 5 | <u>Sometimes customers can</u> |
| <u>immediately.</u> [IC] | | | | | | <u>get very angry.</u> [EU] |

In order to check face validity and practical utility the questionnaire was administered to ten sales assistants of mixed race and gender. The questionnaire was un-timed, but respondents were asked to work as quickly as possible. The time taken to complete the questionnaire was recorded (approximately 20 minutes in all cases). On completion, respondents were asked to comment on how representative the questionnaire was of their current job, and if any of the items appeared unusual or inappropriate. The questionnaire was also administered to six undergraduate students who had no previous retail or sales experience. Both groups expressed no difficulty with either the instructions or items.

The questionnaire was subsequently administered to a convenience sample of 500 sales assistants employed in retail stores throughout the UK. A letter was sent to store managers explaining that the purpose of the study was to explore factors associated with good and poor job performance. Their help was requested in completing performance rating questionnaires for staff and in ensuring that as many as possible of their sales assistants completed the questionnaire. All sales assistants were assessed on an individual basis under the instruction of a qualified Store Personnel Officer who assured them that their responses were confidential and that no information regarding individuals' performance would not be returned to the company. Biographical data was also requested including gender and ethnicity. Immediately prior to completing the questionnaire, sales assistants were given standardized instructions and two example items. At this stage participants were also administered a 15-item job satisfaction questionnaire (see Warr, Cook & Wall, 1979).

Stage 2: Psychometric development of the attribution questionnaire

All questionnaires were returned to the authors for analysis. The attribution questionnaire was investigated for its psychometric properties including (i) item analysis, (ii) examining the factor structure using Exploratory Factor Analysis and (iii) establishing the reliability of the outcome solution. Item selection was devised to produce a set of items that were normally distributed. All items were examined for skew and kurtosis and any item greater than +/- 2.0 was discarded in order to

minimize error variance. The remaining items were factor analysed using Principle Components Analysis and were rotated to simple structure using varimax rotation.

Stage 3: Assessment of job performance

Although previous researchers have emphasized the disadvantages of using managers' assessments of job performance (Barling, Callaway & Cheung, 1996; Macon, 1994), objective performance data such as amount of sales achieved could not be used for this study. In this organization individual sales assistants frequently work in different product areas such as electrical goods and beauty products that have varying retail values; they may also spend different amounts of time working the cash till rather than on the shop floor approaching customers. Similarly, the location of stores (i.e. whether located in areas of high or low economic prosperity) can have a profound influence upon volume and financial value of sales achieved.

Consequently, job performance was assessed using a 23-item questionnaire based upon the company's appraisal form and the competency model which identifies customer care and sales performance as core criteria for job success. Using a 1-5 Likert-type scale (1=never and 5=very frequently) managers rated sales assistants on the extent to which they demonstrated key behavioural indicators during their work (e.g., 'responds quickly, helpfully and willingly to all customers', 'suggests additional products and services to the customer' and 'actively seeks out opportunities to make a sale'). As the items on this performance questionnaire were highly correlated, total scores for job performance were used for the analyses.

RESULTS

452 attribution questionnaires (90.4% response rate) were returned from sales assistants. Of the sample 424 (94%) were female and 25 (6%) were male; 423 (94%) respondents described themselves as 'White' and 18 (4%) described themselves as 'Asian'. The remaining eleven respondents (2%) described themselves as being 'African', 'Afro-Caribbean' or 'Black other'. Although minor local

variations do exist, these figures are representative of employment statistics for ethnic groups across the company. The sample includes a smaller proportion of male sales assistants than are employed across the company with the national figure being 10.4%. However, there are regional differences with more male sales assistants employed in the Greater London area.

Psychometric Development

Item selection produced a set of 33 items that were normally distributed. Pre-analysis checks were conducted including the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy (0.820) and Bartlett's test of sphericity (3099.65, $p < .001$), both indicating that the data set was appropriate for factor analysis. Factors were then extracted using Principle Components analysis and the final factor solution was rotated to simple structure using varimax rotation. The outcome solution from the scree test indicated a two-factor model accounting for approximately 29% of the variance, with all factor loadings above .32, and no substantial cross-loadings. The factor loading matrix and Eigen values are illustrated in Table 1¹.

INSERT TABLE ONE ABOUT HERE

The authors assigned factor labels to reflect the item content, where Factor 1 was labeled 'attributions for positive outcomes' and comprised 18 items, and Factor 2 was labeled 'attributions for negative outcomes' and comprised 15 items. For both factors low scores represent internal-controllable [IC] responses and high scores represent external-uncontrollable [EU] responses. Examples of items from Factors 1 and 2 are given below:

(Factor 1- Attributions for positive outcomes): You are working in the gift department when a customer approaches you and asks you where a particular product is. The product is not in your department so you take the customer upstairs to another floor to

¹ For illustration purposes in Table 1 only internal-controllable responses and the question have been listed for each item. Scenarios and external-uncontrollable responses have been omitted but are referred to in the Discussion section.

find the product they want. The customer is pleased. Why do you think the customer is pleased?

| | | | | | | |
|--|---|---|---|---|---|--|
| <u>You showed the customer the correct department.</u> | 1 | 2 | 3 | 4 | 5 | <u>The customer found the product she needed.</u> [EU] |
|--|---|---|---|---|---|--|

[IC]

(Factor 2: Attributions for negative outcomes): You are working on the perfume counter when a customer comes in and asks to try a perfume. You spray some on her wrist, but she is not happy and asks to try another perfume. The customer tries ten different types but in the end decides not to buy any. Why do you think the customer did not buy any perfume?

| | | | | | | |
|---|---|---|---|---|---|---|
| <u>You did not try to sell the perfumes.</u> [IC] | 1 | 2 | 3 | 4 | 5 | <u>The customer just wanted to try the perfumes.</u> [EU] |
|---|---|---|---|---|---|---|

Scale descriptives and internal reliability for both attribution scales are illustrated in Table 2. Both scales demonstrated sufficient internal reliability and there was no significant correlation between the scales. Similarly, the job satisfaction scale demonstrated good internal reliability.

Managers' Ratings of Job Performance

368 job performance questionnaires were returned from managers. Items were factor analysed using Principle Components Analysis to explore the underlying structure (using the same procedure as described above). Results indicated a one factor solution accounting for 43% of the variance (Eigen value 9.8) with a mean items loading of .65. Descriptives are illustrated in Table 2 and the scale demonstrated good internal reliability.

Initial correlations between the two attribution scales and sales assistants job performance ratings are also shown in Table 2. These results show a significant

negative association between attributions for positive outcomes and job performance ($r = -.21, p < .01$) such that more internal-controllable attributions for positive outcomes are associated with higher performance ratings. Similarly, there was a significant negative association between attributions for negative outcomes and job performance ($r = -.11, p < .05$) indicating that internal-controllable attributions were related to higher performance.

INSERT TABLE TWO ABOUT HERE

A hierarchical moderator linear regression was performed to test the study hypotheses and to explore the relationship between attributions for positive and negative outcomes (hypothesis four). The two main effects were entered at step one (attributions for positive and negative outcomes) and the interaction effect (the cross product of the two attributions) was entered at step two (see Table 2). The regression equations at step one ($R^2 = .054, F(2, 349) 9.9, p < .0001$) and step two ($R^2 = .066, \Delta R^2 .012, F(1, 348) 4.7, p < .05$) were significant. At step one there was a significant negative association between attributions for positive outcomes (Beta = $-.204, t = -3.9, p < .0001$) and managers' performance ratings. This indicates that sales assistants who made more internal-controllable attributions for positive outcomes received higher performance ratings from their managers, providing support for hypothesis one. The previous association found between attributions for negative outcomes and job performance did not achieve significance in the regression analysis. Overall, sales assistants who made more internal-controllable attributions for negative outcomes did not receive higher ratings from their managers. Thus support was not found for hypothesis two. An unexpected significant interaction was found at step two (Beta = $-.749, t = -2.1, p < .05$). Individuals who made more external-uncontrollable attributions for positive outcomes received higher performance ratings if they made more internal-controllable attributions for negative outcomes. However, individuals who made more internal-controllable attributions for positive outcomes demonstrated little variation with respect to attributions for negative outcomes. As individuals who made external-uncontrollable attributions for negative outcomes did not receive higher performance ratings from managers: consequently hypothesis three was rejected.

INSERT TABLE THREE ABOUT HERE

Attributional style and job satisfaction

To explore construct validity, correlations between job satisfaction and attributions for both positive and negative outcomes were examined. Results indicated that internal-controllable attributions for positive outcomes (Factor 1), but not negative outcomes (Factor 2), were significantly associated with higher levels of job satisfaction ($r = -.12, p < .05$). This suggests that individuals who make more internal-controllable attributions for positive outcomes are more likely to be satisfied with their work.

DISCUSSION

The broad aim of this study was to compare the predictive validity of two attributional models of job performance among retail sales assistants. We predicted that, in a retail sales context, the 'achievement-motivation' [AM] attributional model of sales performance would predict managers' performance ratings for retail sales assistants more successfully than the 'learned helplessness' [LH] model proposed by Seligman and Schulman (1986). The main findings were as follows:

1. The attribution questionnaire yielded a two-factor model of attributional style with minimal cross-loadings between factors. Factor 1, was defined as 'attributions for positive job-related outcomes', and Factor 2 as 'attributions for negative job-related outcomes'. Initial correlations between attributions and performance data indicated that sales assistants who made more internal-controllable [IC] attributions for positive ($r = .21, p < .01$) and negative ($r = .11, p < .05$) job-related outcomes received significantly higher performance ratings from managers. However, in the regression analysis, attributions for positive but not negative outcomes predicted performance (Beta = $-.20, t = -3.9, p < .0001$). These findings provide support for hypothesis one.

2. Hypothesis two was not supported. Individuals who made more IC attributions for negative outcomes did not receive higher ratings from their managers. However, an un unexpected interaction effect suggests that possession of an IC attributional style for negative outcomes may ameliorate the effects of an external-uncontrollable [EU] attributional style for positive outcomes.
3. No support was found for hypothesis three, which was derived from the LH model of attributional style and sales performance. This predicted that higher performance ratings would be found for individuals who attributed the causes of negative outcomes to more external causes.
4. There was a significant association between job satisfaction and Factor 1 (attributions for positive outcomes) but not with Factor 2 (attributions for negative outcomes). Individuals who made more IC attributions for positive events were more likely to be satisfied with their work.

These findings demonstrate a relationship between the way in which sales assistants explain customer interactions, and managers' ratings of their job performance. In this sales role at least, attributions for positive (i.e. successful) customer interactions are better predictors of job performance ratings than attributions for negative (unsuccessful) interactions. These results are similar to those of Corr and Gray (1996) who also found that attributions for positive outcomes were better predictors of performance than attributions for negative outcomes. Two questions emerge from this research: a) why do attributions predict managers' ratings of employee performance, and b) why are attributions for positive outcomes better predictors of managers' ratings than attributions for negative outcomes?

To take the first of these questions, the AM model assumes that individuals who make more IC attributions will attribute outcomes to their own efforts and, as a consequence, will be more likely to seek to proactively manage their environment. Therefore individuals with an IC attributional style may be more likely to approach

customers, initiate interactions, and actively create sales and service opportunities. In contrast, individuals who make more EU attributions will typically wait for things to happen to them. As one manager in this study commented: "...if only I could get my poor performers to understand that sales do not simply occur because customers have run out of shampoo or conditioner, but that they (sales assistants) can make a difference!" The most likely explanation for these results is that IC attributions predict managers' performance ratings because they impact upon employees' proactive behaviour towards customers and, thus, their increased likelihood of achieving sales and providing good service.

However, it is important to note that no direct observation of employee behaviour was undertaken in this study and, as such, it is not possible to confirm the existence of a direct link between attributions and behaviour. Further research is needed to clarify the mechanisms by which individual differences in attributional style influence behaviour, for example, by observing employees interacting with customers or by counting the number of times that employees approach customers over a pre-specified time period. Ethical concerns associated with behavioural observation of employees may mean that further studies will need to rely on laboratory-based simulations. However, one possible alternative would be to utilize web-based technology that allows individuals to interact with customers in realistic job simulations.

Interestingly, the factor structure derived from this study suggested that the sales assistants did not differentiate meaningfully between attributions for sales performance and attributions for customer care. One explanation for this may relate to the extent to which customer service and sales behaviors are conceptually distinct. Although organizations have historically sought to ensure customer retention and maximize repeat business through excellent customer service (Evans & Grant, 1992; Furnham & Gunter, 1993; Lusch & Dunne, 1990; Stewart, 1996), many organizations, including the one involved in this study, view customer service and sales as being equally important aspects of the sales role. Moreover, sales are frequently achieved via customer service, such that sales assistants are expected to offer advice to

customers, and help them to find products in order to secure high levels of sales (Crosby, Evans & Cowles, 1990). Good customer service and sales performance may therefore rely upon the same behavioural indicators that are associated with approaching customers to offer help and assistance or to initiate a sale. It is also possible, however, that in organizations where sales performance is emphasized over and above customer service (e.g., organizations that employ performance related pay for sales people) the factor structure might differentiate more clearly between sales and service attributions. Again, further research involving different organizations and varying sales roles may add to our understanding of the cognitive factors that contribute to successful performance in sales people.

With respect to the second question (why are attributions for positive outcomes better predictors of managers' ratings than attributions for negative outcomes?) two potential explanations emerge from the findings. The first of these relates to the possibility that attributions for positive and negative outcomes reflect different psychological processes. For example, IC attributions for positive outcomes may reflect a person's propensity to be pro-active. However, IC attributions for negative outcomes may reflect their ability to deal effectively with conflict, failure or rejection. These findings suggest that attributional style for positive and negative outcomes are not necessarily related, and that an individual might typically make EU attributions for positive outcomes, but IC attributions for negative outcomes. Such a pattern would suggest that whilst the individual may feel less comfortable initiating customer contact and orchestrating sales, he or she might be more at ease dealing with customer complaints and potential conflict. Thus the proactive behaviour central to sales and some aspects of customer service may be conceptually different from the psychological resilience and confidence required by sales staff in dealing with interpersonal failure and conflict. This differentiation fits with recent developments in the field of motivational traits. For example, in discussing the need to understand the underlying constructs of motivational traits Heggstaad (2002) proposes that we focus on two general components: 'Approach' (related to competitiveness, mastery, learning goal orientation etc) and 'Avoidance' (related to worry, emotionality, fear of failure and performance-avoidance). Similarly, Kanfer and Ackerman (2002) argue

for a distinction between 'Approach' as related to mastery motivation, and 'Avoidance' as related to anxiety and performance avoidance. It is therefore possible that the distinction found in this study between attributions for positive and negative outcomes might be explained in terms of these two motivational mechanisms. For example an IC attributional style appear to relate to 'mastery, approach and goal orientation', whereas IC attributions for negative events may be negatively related to 'worry, anxiety and fear of failure'. Clearly there is an exciting opportunity for further research investigating the construct validity of these factors in other sales situations.

Finally, it should be noted that the finding in this study that IC attributions for positive outcomes were better predictors of managers' performance ratings than those for negative outcomes. It is possible that managers base their performance ratings more typically on the incidence of proactive behaviour, rather than observation of behaviour in difficult situations such as conflict, simply because positive and negative outcomes occur with different frequencies. For example, positive outcomes (e.g., approaching a customer, offering assistance) may be more frequent, and therefore more easily observed by managers, than negative outcomes (e.g., conflict with customer). One interesting possibility, however, is that IC attributions for negative outcomes such as dealing with customer dissatisfaction could well prove better predictors of performance ratings by customers.

Study limitations

Clearly there is a need for future research to address limitations of the current study. For example, the study's cross-sectional design means that it is not possible to determine whether employees' attributions for customer interactions are stable and pre-determine performance, or whether they change as a result of the individual's experience. For example, do poor performers make proportionately more external-uncontrollable attributions if they encounter repeated failures in their dealings with customers? Evidence from research in other areas suggests that attributional style is relatively stable (e.g., Forsterling, 1985) and that it predicts behaviour over a number of years (Brewin, 1985). However, it is clear that further

longitudinal research and predictive validity studies is needed to determine the nature of the causal relationship between attributions and employee behaviour.

In addition, this study focused on two causal dimensions: internal-external and controllable-uncontrollable. However, an individual's perception of the stability of the cause has also been proposed as an important determinant of affect and behaviour (Weiner, 1986; Seligman & Schulman, 1986). Negative outcomes attributed to stable causes have been found to have a more pronounced effect upon subsequent affect and behaviour (e.g., giving up) than those attributed to unstable causes. In this study, the majority of scenarios produced by sales assistants during the initial interviews were explained in terms of causes that were unstable. Consequently, the stable dimension was excluded from this study in order to maintain face validity. In addition, using the continuous single dimension of IC-EU meant that we made no assessment of attributions that might be coded internal-uncontrollable. This, together with an assessment of the impact of the stability dimension, is clearly an area worthy of further research.

Conclusions and future directions

Several personality constructs are conceptually similar to the 'internal-controllable' attributional style, including: 'personal initiative' (Frese, Fay, Hilburger, Leng & Tag, 1997), 'locus of control' (Spector, 1982), 'need for achievement' (McClelland, 1987), and 'self-efficacy' (Bandura, 1982). Despite being derived from a variety of all share a common component: they these relate to an individual's belief in their ability to influence the environment and other people. For example, according to Frese et al. (1997) personal initiative can be defined as "a behaviour syndrome resulting in an individual taking an active and self-starting approach to work and going beyond what is formally required in a given job" (p.140). More specifically, unlike traditional personality traits, these constructs all possess a core cognitive component. Thus, an individual's cognitions, derived from past experience and acquired knowledge, are viewed as being equally important as determinants of an individual's behaviour as the personality traits that they were born with.

In the late 1970s Bell (1979) criticized developmental psychologists for forgetting that 'parents too are thinking beings'. His intention was to remind researchers that the way in which parents make sense of, and seek to understand their children's behaviour can also have a profound effect upon how parents choose to respond to that behaviour. It is a criticism that could equally be leveled at occupational psychologists overly focused on personality traits as predictors of work behaviour. By focusing on static, largely pre-determined personality traits we risk treating people as unthinking passive reactants to their environment or their genetic make-up (Skarlicki, Folger & Tesluk, 1999). However, by recognizing that employees draw upon their experience and knowledge of past situations, and actively attempt to make sense of their work situations, our view of individuals changes to one of proactive managers of their environment. A cognitive perspective does not rule out the existence of relatively stable predispositions to behave in certain ways, nor indeed, relatively stable cognitive belief structures. A cognitive perspective is important, however, because it seeks to re-instate the role of sense-making as a predictor of behaviour. Although, many organisations are already focused on the need for individuals to be flexible, to learn and to adapt, selection methods that focus upon fitting a static personality profile to a job can mitigate against this flexibility (Anderson & Herriot, 1997). A key challenge for psychologists must surely be to begin to unpack the relationship between personality traits, cognitions and behaviour, in order to celebrate the individual as 'a manager of', rather than 'a respondent to', their work environment.

REFERENCES

- Abramson, L.Y., Seligman, M.E.P. & Teasdale, J. (1978). Learned helplessness in humans: critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.
- Anderson, C.A. (1983). Motivational and performance deficits in interpersonal settings: The effect of attributional style. Journal of Personality and Social Psychology, 45, 1136-1147.
- Anderson, C.A. & Jennings, D.L. (1980). When the experiences of failure promote expectations of success: The impact of attributing failure to ineffective strategies. Journal of Personality, 48, 393-407.
- Anderson, N.R., & Herriot, P. (1997). Selecting for change: How will personnel and selection psychology survive? Chapter 1, pp.1-38 in N.R. Anderson & P. Herriot (Eds.) International Handbook of Selection and Assessment. Chichester: John Wiley & Sons.
- Ashforth, B.E. & Fugate, M. (2000). Attributional style in work settings: Development of a measure. Paper presented at the Academy of Management Meeting, Toronto.
- Bandura, A. (1982). Self-efficacy: mechanism in human agency. American Psychologist, 37, 122-147.
- Barling, J., Callaway, E.K., & Cheung, D. (1996). Time management and achievement striving interact to predict car sales performance. Journal of Applied Psychology, 81, 821-826.
- Barrick, M.R. & Mount, M.K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. Personnel Psychology, 44, 1-26.
- Barrick, M.R., Mount, M.K., & Strauss, J.P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. Journal of Applied Psychology, 78, 715-722.
- Bell, R.Q. (1979). Parent, child and reciprocal influences. American Psychologist, 34, 821-826.
- Brewin, C.R., (1985). Depression and causal attributions: What is their relation? Psychological Bulletin, 98, 297-309.
- Cohen, J. & Cohen, P. (1983). Applied multiple regression/correlation: Analysis for the behavioral sciences. 2nd Edition. London: LEA.
- Corr, P.J. & Gray, J.A. (1996). Attributional style as a personality factor in insurance sales performance in the UK. Journal of Occupational and Organizational Psychology, 69, 83-87.

- Cravens, D.W., Ingram, T.N., LaForge, R.W., & Young, C.E. (1993). Behavior-based and outcome-based salesforce control systems. Journal of Marketing, *57*, 47-59.
- Crosby, L.A., Evans, K.R. & Cowles, D. (1990). Relationship quality in services selling: An interpersonal influence perspective. Journal of Marketing, *54*, 68-81.
- Evans, K.R. & Grant, J.A. (1992). Compensation and sales performance of service personnel: A service transaction perspective. Journal of Personal Selling and Sales Management, *12*, 39-49.
- Försterling, F. (1985). Attributional retraining: A review. Psychological Bulletin, *98*, 495-512.
- Frese, M., Fay, D., Hilburger, T., Leng, K. & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. Journal of Occupational and Organizational Psychology, *70*, 139-162.
- Furnham, A., Brewin, C.R., & O'Kelly, H. (1994). Cognitive style and attitudes to work. Human Relations, *47*, 1509-1521.
- Furnham, A., Sadka, V., & Brewin, C.R. (1992). The development of an occupational attributional style questionnaire. Journal of Organizational Behavior, *13*, 27-39.
- Furnham, A. & Gunter, B. (1993). Corporate Assessment. London. Routledge.
- Green, S.G. & Mitchell, T.R. (1979). Attributional processes of leaders in leader-member interactions. Organizational Behavior and Human Performance, *23*, 429-458.
- Heaven, P. (1994). Occupational attributional style and attitudes to work: An Australian study. Australian Psychologist, *29*, 57-61.
- Heggestad, E.D. (2002). New directions in research on motivational traits. Discussion. Symposium presented at the Society for Industrial and Organizational Psychology 17th Annual Conference, Toronto.
- Heneman, R.L., Greenberger, D.B., & Anonyuo, C. (1989). Attributions and exchanges: the effects of interpersonal factors on the diagnosis of employee performance. Academy of Management Journal, *32*, 466-476.
- Hewstone, M. (1989). Causal attributions: From cognitive processes to social beliefs. New York: Wiley.

- Jennings, D.L. (1979). Effects of attributing failure to ineffective strategies (Doctoral dissertation, Stanford University, 1979) Dissertation Abstracts International, 1980, 40B, 5461B. (University Microfilms No. 80-11, 654)
- Kanfer, R. & Ackerman, P.L. (2002). Non-ability influences on volition during skill training. Paper presented as part of the symposium: New directions in research on motivational traits. Society for Industrial and Organizational Psychology 17th Annual Conference, Toronto.
- Kipnis, D.S., Schmidt, K., Price, K., & Stitt, C. (1981). Why do I like thee? Is it your performance or my orders? Journal of Applied Psychology, 66, 324-328.
- Lusch, R.F. & Dunne, P. (1990). Retail Management. Cincinnati OH: South-Western.
- Macon, T.H. (1994). Time management: Test of a process model. Journal of Applied Psychology, 79, 381-391.
- McClelland, D.C. (1987). Human motivation. Cambridge: Cambridge University Press.
- Mullen, B. & Riordan, C.A. (1988). Self-serving attributions for performance in naturalistic settings: A meta-analytic review. Journal of Applied Social Psychology, 18, 3-22.
- Munton, A. Silvester, J., Stratton, P. & Hanks, H.G.I. (1999). Attributions in action: A practical guide to coding qualitative material. Chichester: Wiley.
- Peters, T. J. & Waterman, Jr., R.H. (1982). In Search of Excellence: Lessons from America's Best Run Companies. Fifth edition. Englewood Cliffs NJ: Prentice-Hall.
- Peterson, C., Semmel, A., Von Baeyer, C., Abramson, L.Y., Metalsky, G.I., & Seligman, M.E.P. (1982). The attributional style questionnaire. Cognitive Therapy and Research, 6 (3), 287-300.
- Schulman, P. (1999). Applying learned optimism to increasing sales productivity. Journal of Personal Selling and Sales Management, 19 (1), 31-37.
- Seligman, M.E.P. (1991). Learned optimism. New York: Knopf.
- Seligman, M.E.P. & Schulman, P. (1986). Explanatory style as a predictor of productivity and quitting among life insurance sales agents. Journal of Personality and Social Psychology, 50, 832-838.
- Silvester, J. (1997). Spoken attributions and candidate success in graduate recruitment interviews. Journal of Occupational and Organizational Psychology, 70, 63-71.

- Silvester, J., Anderson, N.R., & Patterson, F. (1999). Organizational culture: An inter-group attributional analysis. Journal of Occupational and Organizational Psychology, *72*, 1-24.
- Silvester, J. & Chapman, A.J. (1997). Asking ‘Why?’ in the workplace: Causal attributions and organizational behavior. Chapter 1 (pp. 1-14) in C.L. Cooper & D.M. Rousseau (Eds.) Trends in Organizational Behavior, *4*. Chichester: Wiley.
- Skarlicki, D.P., Folger, R. & Tesluk, P. (1999). Personality as a moderator in the relationship between fairness and retaliation. Academy of Management Journal, *42*, 100-108.
- Spector, P.E. (1982). Behavior in organizations as a function of employee’s locus of control. Psychological Bulletin, *91*, 482-497.
- Stewart, G.L. (1996). Reward structure as a moderator of the relationship between extraversion and sales performance. Journal of Applied Psychology, *81*, 619-627.
- Stratton, P. & Swaffer, R. (1988). Maternal causal beliefs for abused and handicapped children. Journal of Reproductive and Infant Psychology, *6*, 201-216.
- Sujan, H. (1986). Smarter versus harder: An exploratory attributional analysis of sales people’s motivation. Journal of Marketing Research, *23*, 41-49.
- Thomas, M.J. (1988). Getting closer to the customer. Marketing Intelligence Planning, *6*, 28-31.
- Vinchur, A.J., Schippmann, J.S., Switzer III, F.W. & Roth, P.L. (1998). A meta-analytic review of predictors of job performance for sales people. Journal of Applied Psychology, *83*, 586-597.
- Warr, P.B., Cook, J., & Wall, T.D. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. Journal of Occupational Psychology, *52*, 129-148.
- Weiner, B. (1986). An attributional theory of motivation and emotion. New York: Springer-Verlag.

Table 1: Factor Labels and Items

| | Factor Loadings | |
|--|-----------------|------|
| | 1 | 2 |
| <u>Factor 1: Attributions Positive Outcome {EV = 5.52}; [16.8%]</u> | | |
| <u>Why do you think the customer is pleased?</u> You helped the customer find the product she wanted. | <u>.70</u> | -.10 |
| <u>Why do you think the customer didn't mind joining the queue?</u> You were polite and explained the situation. | <u>.67</u> | .01 |
| <u>Why do you think the customer is satisfied?</u> You were very apologetic and understanding. | <u>.63</u> | .07 |
| <u>Why did the customer buy the product?</u> You went up to the customer and helped him make his purchase. | <u>.62</u> | -.05 |
| <u>Why did the customer buy the chocolate?</u> You showed him where the chocolate was. | <u>.58</u> | -.14 |
| <u>Why do you think the customer waited?</u> You explained that you would only be a little while. | <u>.56</u> | -.12 |
| <u>Why do you think the couple spent £60?</u> You showed them a selection of pens. | <u>.54</u> | .06 |
| <u>Why do you think the gentleman became angry?</u> You didn't ask another assistant to help you serve the customers. | <u>.53</u> | .13 |
| <u>Why did the customer buy the make-up?</u> You spent time with the customer. | <u>.51</u> | .02 |
| <u>Why do you think the customer calmed down?</u> You took the blame for the mistake. | <u>.51</u> | -.11 |
| <u>Why do you think the customer bought so much?</u> You discussed with the customer what he might need. | <u>.51</u> | .02 |
| <u>Why do you think you have made so many sales this Christmas?</u> You are confident and well trained. | <u>.50</u> | .16 |
| <u>Why do you think she bought so many bottles of hand cream?</u> You took time and trouble to help her. | <u>.49</u> | .07 |
| <u>Why do you think the customer is pleased?</u> You showed the customer the correct department. | <u>.48</u> | .09 |
| <u>Why do you think the customer is satisfied?</u> You were able to handle the situation well. | <u>.46</u> | -.07 |
| <u>Why do you think the customer spent so much?</u> You made the customer feel relaxed. | <u>.42</u> | .05 |
| <u>Why do you think the elderly couple bought the present?</u> You approached the couple and offered to help them. | <u>.41</u> | -.07 |
| <u>Why do you think you have sold so much?</u> You know a lot about the products you are selling. | <u>.40</u> | .19 |

| Factor 2: Attributions Negative Outcome {EV = 3.85}; [11.8%] | 1 | 2 |
|---|------|-----|
| <u>Why do you think the customer did not buy any perfumes?</u> You did not know enough about the perfumes. | .09 | .70 |
| <u>Why didn't the customer buy anything?</u> You did not try to sell the product. | .05 | .68 |
| <u>Why do you think the customer decided not to buy?</u> You did not have very good ideas. | -.11 | .56 |
| <u>Why do you think she wanted to speak to your manager?</u> You did not apologize immediately. | .16 | .54 |
| <u>Why did the customer decide not to buy anything?</u> You did not know enough about the product. | -.10 | .51 |
| <u>Why do you think the customer decided not to buy?</u> You did not make the right suggestions. | -.12 | .49 |
| <u>Why wasn't the customer satisfied?</u> You did not spend enough time looking. | .01 | .49 |
| <u>Why do you think he wanted to speak to your manager?</u> You do not know very much about this area. | .05 | .49 |
| <u>Why is the customer annoyed?</u> You gave her the wrong change. | .16 | .48 |
| <u>Why do you think the customer did not buy?</u> You tried too hard to persuade him. | .15 | .46 |
| <u>Why do you think the customer decided not to buy?</u> You didn't apologize to the customer. | .30 | .42 |
| <u>Why didn't the customer buy anything?</u> You might have been too enthusiastic. | -.09 | .40 |
| <u>Why didn't the customer buy another box?</u> You were a little slow in telling her about the special offer. | -.27 | .40 |
| <u>Why do you think the customer complained?</u> You didn't explain the reason for the move. | .20 | .35 |
| <u>What do you think made the gentleman become angry?</u> You weren't fast enough serving the lady with the sun-tan cream. | -.16 | .32 |

Note: {EV} = eigen value; [%] = Proportion of variance accounted for in the model

Table 2. Correlations Between Attribution Factors and Job Performance Ratings

| | Mean | SD | α | 1. | 2. | 3. |
|---|------|------|----------|--------|-------|-------|
| 1. Factor 1: Attributions - positive outcomes | 39.0 | 11.2 | .85 | | | |
| 2. Factor 2: Attributions - negative outcomes | 48.3 | 9.0 | .78 | .07 | | |
| 3. Managers' job performance ratings | 91.2 | 12.6 | .93 | -.21** | -.11* | |
| 4. Job satisfaction questionnaire | 59.2 | 9.2 | .88 | -.12* | .03 | .21** |

Note: 1. * significant at the .05 level (2-tailed); ** significant at the .01 level (2-tailed) (N= 368)
 2. High scores on factors indicate External-Uncontrollable attributional style, low scores indicate Internal-Controllable attributional style.

Table 3: Regression analysis of attributional factors and job performance ratings.

| | R ² | ΔR ² | Beta |
|--|----------------|-----------------|---------|
| Factor 1: Attributions for Positive Outcomes | .054** | .054** | -.204** |
| Factor 2: Attributions for Negative Outcomes | | | -.098 |
| Interaction | .066* | .012* | -.749* |

Note: * p<.05, ** p<.01