



The development and evaluation of a scale to measure occupational attributional style in the financial services sector

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Abstract

An individual's attributional style, the characteristic way of explaining the causes of events, is related to motivational, performance and affective reactions. In the occupational field, an optimistic attributional style (i.e. internal, stable and global attributions for good events and external, unstable and specific attributions for bad events) has been shown to be significantly correlated with job satisfaction, performance and success at work. However, the most commonly-used measure of attributional style, the attributional style questionnaire (ASQ), has poor internal consistency and its face validity for business applications is limited. This paper describes the development and evaluation of a domain-specific attributional style questionnaire: the financial services attributional style questionnaire. Two studies to assess the psychometric properties of the scale were conducted. Results indicated that it possesses good internal reliability, that the items cluster into two factors corresponding to the positive and negative subscales of the instrument, and that the positive subscale correlates with measures to which it should theoretically relate, namely motivation, learned resourcefulness, psychological strain and intention to quit. The paper is concluded with suggestions for further research. © 2000 Elsevier Science Ltd. All rights reserved.

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1. Introduction

Few people would question the assertion that human beings have a natural desire to seek explanations for events and experiences in their world. Such 'sense making', according to attribution theorists, is especially triggered when individuals encounter unexpected or important

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events. An attributional search is then initiated: the situational information is scanned and a causal attribution is produced (Heider, 1958; Kelley, 1967; Weiner, 1985). This process facilitates the anticipation of future situations, renders the environment more controllable and helps individuals to protect their self-esteem and social identity (Forsyth, 1980).

However, according to Langer (1978), most of the time, people are not actively engaged in monitoring new information, but rather rely on well-learned and general scripts, especially when engaging in familiar, routine or well-practiced activities. Causal schema are developed and stored in long-term memory, providing a framework for understanding future similar situations (Kelley, 1967). Thus when individuals encounter routine or familiar events, or when a situation is ambiguous, the relevant causal schema is automatically accessed.

One type of causal schemata is 'attributional style'. Defined as "the tendency or bias to make particular kinds of causal inferences, rather than others, across different situations and over time" (Alloy, Hartlage & Abramson, 1988, p. 16), attributional style has been shown to be related to motivational, performance and affective reactions.

According to the reformulated learned helplessness (RLH) theory, individuals with a pessimistic attributional style (i.e. internal, stable and global attributions for bad events and external, unstable and specific attributions for good events) are likely to suffer affective, cognitive, self-esteem and motivational deficits associated with helplessness when confronted with negative events (Abramson, Seligman & Teasdale, 1978). At work, this has been shown to translate to reduced effort and persistence, poor performance and employee turnover (e.g. Seligman & Schulman, 1986). Conversely, an optimistic attributional style (i.e. internal, stable and global attributions for good events and external, unstable and specific attributions for bad events) has been shown to predict recovery from depression (Needles & Abramson, 1990) and, in the occupational field, to be significantly correlated with job satisfaction, performance and success at work (Corr & Gray, 1995c; Furnham, Sadka & Brewin, 1992).

Strategies used to measure causal attributions and attributional style can be classed into four general groups. The first consists of scales that require respondents to choose specific attributions such as ability, effort, luck and task difficulty, from which attributional indices are computed. The second strategy requires subjects to write, in free format, the cause of specific outcomes. These attributions are later rated by the researcher in terms of their underlying attributional dimensions (as perceived by the researcher). The third is a content analytic procedure for extracting causal attributions from pre-existing written material, such as diaries, newspaper articles and companies' annual reports, which are then rated by judges according to their dimensional properties. A fourth method involves subjects being asked to rate their own or hypothetical attributions along relevant causal dimensions. This latter strategy is considered to be the most sound, as it does not suffer from the "fundamental attribution researcher error", the researcher assuming that she/he can accurately interpret the meaning of the subject's causal attributions (Russell, 1982).

The most widely accepted measure of attributional style is the attributional style questionnaire, ASQ (Peterson et al., 1982). It conforms to the fourth measurement strategy outlined above. The ASQ consists of twelve hypothetical situations: six positive outcomes (e.g. "you apply for a position that you want very badly and you get it") and six negative outcomes (e.g. "you go out on a date, and it goes badly"). Half the events are achievement-related, the remainder have interpersonal/affiliative themes. Respondents are asked to imagine they are in the situations, to write a cause for each one, and then rate the cause along three attributional dimensions: locus, stability and globality.

Scoring of the questionnaire yields an index for each of the three positive sub-scales and three negative sub-scales. In addition, a composite negative score (CoNeg) is computed by summing across the negative sub-scales, a composite positive score (CoPos) is derived by summing across positive situations; and a total score (CPCN) is calculated by subtracting CoNeg from CoPos.

Psychometric analyses reported by Peterson et al. (1982) indicate that the subscales for good events and for bad events were substantially intercorrelated. The internal consistencies of the six subscales, as assessed by Cronbach's alpha, were modest, ranging from 0.44 to 0.58 for the six good events, and from 0.46 to 0.69 for the six bad events. Test-retest correlations of the six subscales over 5 weeks ranged from 0.58 to 0.70, indicating some temporal consistency in the ASQ, although other work has shown that with depressed subjects, ASQ scores changed as subjects' depression lifted (e.g. Persons & Rao, 1985).

Because of its widespread use, the ASQ has attracted quite a deal of comment (and criticism). Some of the criticism has centred around its poor internal consistency. Peterson et al. (1982) suggest that this may be due to the small number of items (six in each scale) and intercorrelation of the subscales; they recommend that the composite scores for good and bad events be used instead ($\alpha = 0.75$ and 0.72 , respectively). However, several researchers have criticised the use of composite scores (e.g. Carver, 1989; Cochran & Hammen, 1985). Peterson (1991) suggests, in response, that the various dimensions capture a higher order notion to do with the extent and nature of helplessness deficits, which justifies their combination. This is plausible. Furthermore, recent psychometric analyses (Corr & Gray, 1996) have confirmed that, for good events, all three attributional dimensions of CoPos (internality, stability and globality) load on to one factor, whilst for bad events (CoNeg), stability and globality are highly intercorrelated in one factor, with internality loading on to a third factor. Thus, there is some psychometric justification for using the composite scores.

There is now quite a large literature supporting the validity of the ASQ. It has been shown to predict naturally occurring causal explanations (e.g. Peterson & Seligman, 1984; Henry & Campbell, 1995), and to correlate with measures of depression (Sweeney, Anderson & Bailey, 1986), self-esteem (Brewin & Furnham, 1986), anxiety (Johnson & Miller, 1990), hardiness (Hull, van Trueren & Proptom, 1988), achievement (Seligman, 1991), and with indices of success at work (Seligman & Schulman, 1986; Corr & Gray, 1995b). Despite its widespread use, however, questions have been raised about the suitability of the ASQ for occupational settings (Ilgen & Klein, 1989; Kent & Martinko, 1995a). It was developed for administration to college students, therefore some of the hypothetical events are irrelevant for business applications. According to Peterson (1990), the solution is to develop alternative attributional style questionnaires, choosing events of clear concern to the population being studied. This was the purpose in the development of the financial services attributional style questionnaire, described here.

2. Financial services attributional style questionnaire

2.1. Rationale

The diathesis-stress model of hopelessness depression formulated by Abramson, Metalsky and Alloy (1989) predicts that a depressogenic attributional style in a particular content domain

provides specific vulnerability to the symptoms of hopelessness depression when an individual is confronted with negative life events *in that same content domain*. Transposing this model to the occupational sphere, one would expect vulnerability to workplace equivalents (such as demotivation, low job satisfaction, reduced effort, giving up) when an individual is confronted with negative experiences and adversity at work. In order to be able to predict future vulnerability to these effects in the occupational sphere, domain-specific measures of attributional style are necessary. Only two measures of work-related attributional style (Furnham et al., 1992; Kent & Martinko, 1995b) were found in a recent review of the literature and both are general work-related measures. Moreover, the former questionnaire is still being refined with regard to its length and dimensional structure, reliability and construct validity (Xenikou, Furnham & McCarrey, 1997). The latter includes only negative situations, whereas it is now accepted that attributional style for positive situations is different from, and independently important in, predicting work-related affect and behaviour (Corr & Gray, 1995a). For these reasons, together with the relevance of the attributional style construct to the job of financial services selling (Seligman & Schulman, 1986; Corr & Gray, 1995b), the financial services attributional style questionnaire (FSASQ) was developed as a domain-specific attributional questionnaire.

The selling of financial services is a motivationally-challenging occupation in which salespeople are faced by the opposing forces of frequent failure and less frequent success. Although some occupational attributional instruments have been developed to measure work-specific explanatory styles (e.g. Furnham et al., 1992), we decided to focus on financial service sales in order to test the principles of attributional style in a specific domain where a strong association between attributional style and performance might be expected. We predicted significant incremental validity of this specific questionnaire as compared with the ASQ or general work-related attributional questionnaires, because of its high domain-specificity.

2.2. *Development of the FSASQ*

A 16-item scale was developed to assess how individuals make causal attributions for occupational outcomes in the financial services industry. Similar to the attributional style questionnaire, the respondent is asked to supply causes for a number of hypothetical situations, and then rate each cause along a number of attributional dimensions. Causal dimensions rather than causal explanations are measured, as there is general consensus in the literature that it is the dimensional structure of attributions, rather than the nature of the specific attributions themselves, that influences expectancy, affect and behaviour (Kent & Martinko, 1995a). The causal dimensions assessed in the scale were dictated by the context for which the scale was designed. Thus, the stability and globality dimensions were included to gain a measure of cross-temporal and cross-situational consistency of the occupational attributional style (e.g. it is informative to know in work settings whether the construct refers just to a specific aspect, such as promotion, or is more global); and the internality dimension was included to capture the respondents' work-related self-esteem. Initially, consideration was given to adding a fourth dimension — controllability — however, pilot work indicated that it was not independent of the locus dimension. Russell, McAuley and Tarico (1987) reported similar results, finding a correlation between locus of causality and controllability of 0.93.

The ASQ response format was selected for use as it avoids the “fundamental attribution researcher error” (Russell, 1982). Furthermore, it does not constrain the causal explanations

offered by the subject, but at the same time it allows objective quantification of responses by having the subject rate the internality, stability and globality of the causes (Seligman & Schulman, 1986). The use of hypothetical events rather than real-life events, was considered preferable because the former are ambiguous, and do not come equipped with clear attributional information. Therefore, respondents are required to make their own ‘cognitive contribution’ to the situation in order to make a causal attribution, which facilitates the operation and measurement of an attributional style (Alloy, Abramson, Metalsky & Hartlage, 1988). Further, each respondent can be presented with the same set of events, thereby controlling situational information across individuals.

The scale content of the 16 items was tailored to organisational issues. The items pertain solely to the achievement domain (unlike the ASQ, which samples both the affiliation and achievement domains), and consist of hypothetical situations from the financial services industry, specifically the role of insurance selling.

A pool of items was initially developed and given to a number of insurance sales people and sales managers for assessment in terms of face validity, discriminability and necessary ambiguity to allow respondents to impose their own interpretations. Sixteen items (eight positive and eight negative) were chosen as being most relevant to the role of insurance selling. The scale items are outlined in Table 1.

The instrument is scored by aggregating the three dimensional scores for the eight positive items, and dividing by eight (the number of items), to provide a composite positive score (CoPos), and doing the same for the eight negative items to provide a composite negative score (CoNeg).

2.3. Psychometric analysis

Two studies to assess the psychometric properties of the scale were conducted. In the first, 103 newly-appointed insurance sales agents completed both the FSASQ and the ASQ in the 2nd

Table 1
The hypothetical events of the FSASQ

Item	Hypothetical event
Positive 1	You get an exceptionally large bonus at the end of the month
Positive 2	You have found a significant number of good prospective clients
Positive 3	You apply for a promotion and get it
Positive 4	You are top salesperson for the month
Positive 5	You carry out a highly successful sales promotion
Positive 6	You are asked to head an important project
Positive 7	You earn more than £2000 commission on one case
Positive 8	Your work is highly praised by a colleague
Negative 1	Your work is criticised in a team meeting
Negative 2	You fail your licensing exam
Negative 3	You were the only member of a team who did not qualify for a major company incentive
Negative 4	You haven't reached target for three months in a row
Negative 5	You recruit a team of consultants and they leave
Negative 6	Your manager gives you a poor quarterly report
Negative 7	You can't get all the work done that others expect of you
Negative 8	Your manager acts negatively towards you

week of their 2-week induction course. The respondents were 88% male, with an age range of 20–45 years.

2.3.1. Internal reliability

Table 2 presents the means, standard deviations and internal consistencies (Cronbach's coefficient alphas) for each of the dimensional sub-scales and the composites.

The results indicate good internal reliability for both composite scales (CoPos and CoNeg), and within the six individual dimensions as well. All coefficients were clearly above 0.7, as recommended by Nunnally (1978). Parenthetically, it is interesting to note that the internal consistency of the composites, as well as of the individual dimensions of this scale, were, on the whole, better than those of both the ASQ (Peterson et al., 1982) and the occupational attributional style questionnaire, OASQ (Furnham et al., 1992), possibly reflecting the homogeneous, domain-specific nature of the situations. The high alphas may be attributed to the homogeneity of item content within each scale, reflecting the high domain-specificity of the instrument.

2.3.2. Factor analysis

A principal-components analysis with Kaiser's unity criterion for extraction and varimax-rotation was performed on the six dimensional sub-scales. Table 3 presents the results. Two factors, accounting for 76% of the variance, emerged. The first factor comprised the three positive sub-scales (internality, globality and stability) plus negative internality, and the second factor reflected the three negative sub-scales. This result indicates that the three dimensions are clustering

Table 2
Means, SDs and alphas for the FSASQ sub-scales and composites

	Positive events			Negative events		
	\bar{x}	SD	Alpha	\bar{x}	SD	Alpha
Internality	6.11	0.89	0.81	5.14	1.23	0.80
Stability	6.11	0.84	0.85	4.22	1.59	0.88
Globality	5.57	1.05	0.76	3.66	1.62	0.88
Composite	5.95	0.82	0.91	4.55	1.19	0.91

Table 3
Varimax-rotated principal components analysis of FSASQ scales^a

	Factor 1	Factor 2	Communality
CoPos internality	0.90		0.83
CoPos stability	0.90		0.86
CoPos globality	0.83		0.70
CoNeg internality	0.41	0.58	0.51
CoNeg stability		0.92	0.84
CoNeg globality		0.91	0.85
Eigenvalue	3.10	1.49	
Percent variance	51.65	24.89	

^a Loadings over 0.3 reported.

into a factor within each group of positive and negative items, and provides justification for using the composite positive and negative scores.¹ The pattern of loadings suggests that *hopelessness* (i.e. stability + globality) are separate constructs for positive and negative situations, but that internality for positive and negative events are related constructs. The fact that we have also found this pattern of effects using the ASQ (Corr & Gray, 1996), suggests that the effect is robust and not peculiar to only one instrument. However, this finding was not found by Xenikou et al. (1997) using their OASQ, who also found that negative stability was not correlated with negative internality. It is unclear why the OASQ yields different results to the well-established ASQ and to our financial services ASQ. However, like Xenikou et al., we too observed a positive correlation between CoPos and CoNeg ($r = 0.36$, $p = 0.01$). Although statistically significant, the magnitude of the relationship is still small, confirming the relative independence of the two scales.

2.3.3. Validity

2.3.3.1. Relationship of FSASQ with ASQ. Pearson product moment correlations were computed on the CoPos and CoNeg scales of the FSASQ and ASQ; correlations of $r = 0.61$ ($p < 0.001$) for CoPos, and $r = 0.63$ ($p < 0.001$) for CoNeg were found to exist. When corrected for attenuation, the correlations increased to $r = 0.75$ (CoPos) and $r = 0.78$ (CoNeg). Thus the FSASQ possesses a more than adequate degree of convergent validity with the ASQ. When, however, the FSASQ was correlated with the achievement items only of the ASQ, the correlation coefficients decreased to $r = 0.52$ (CoPos) and $r = 0.59$ (CoNeg). One explanation may be the low number of ASQ items in each of the positive achievement and negative achievement cells (only three items in each cell), and their poor internal consistency. In addition, psychometric analyses of the ASQ conducted with US samples found no evidence of the discriminability of the achievement items from the affiliative items (Peterson et al., 1982).

2.3.3.2. Concurrent validity of FSASQ. A second study was conducted to investigate the concurrent validity of the FSASQ. Fifty-two existing financial service agents (95% male, mean age 35 years, average length of tenure 8 years) from another large UK insurance company participated in this study. The research was part of a larger study evaluating an attributional change programme to enhance productivity and to reduce quitting (Proudfoot et al., submitted). The relationship between the FSASQ and a number of theoretically-related psychological variables was explored. Intrinsic motivation, intention to quit, learned resourcefulness and psychological strain, as measured by the following scales, were analysed in conjunction with the CoPos and CoNeg sub-scales of the FSASQ. The internal consistencies of the two FSASQ sub-scales in this study were $\alpha = 0.89$ and $\alpha = 0.91$, respectively.

2.4. Measures

- *Intrinsic motivation scale* (Warr, Cook & Wall, 1979). This scale is described by its authors as a short, robust scale for employees of modest educational attainment. It consists of six items,

¹ As in the Corr and Gray (1996) study, negative internality loaded uniquely on to a third factor (eigenvalue for third factor was 0.62, which accounted for 10.36% of the variance). Communalities increased from 0.51 to 0.97 with a three-factor solution. However, there are good theoretical reasons for combining all three CoNeg sub-scales because, taken together, they represent a disposition to adverse reactions to failure.

such as “I feel a sense of personal satisfaction when I do this job well”, which are rated on a 7-point dimension and summed. The psychometric qualities of the scale, assessed in two studies of male blue-collar workers, were reported as: $\bar{x} = 35.13$ (SD 5.5) and $\bar{x} = 36.82$ (SD 5.5), with a coefficient alpha of 0.82 in both instances, and a test–retest correlation of 0.65. Principal components analysis with varimax rotation showed that all scale items loaded on to a single factor, and were factorially independent from other measures employed in the research (Cook, Hepworth, Wall & Warr, 1981). In the present research, the internal consistency of the scale was $r = 0.76$.

- *Intention to leave scale* (Guest, Peccei & Thomas, 1993). Intention to leave is regarded as a much simpler measure than actual termination because it is not cluttered by uncontrollable external factors (such as job availability) which influence the decision to leave (Nicholson, Wall & Lischeron, 1977). The scale consists of three items:

This job has not met my expectations

I sometimes feel like leaving this job for good

All things considered, I would like to find a comparable job in another organisation.

Psychometric analyses undertaken by Guest et al. indicate that the items have good internal consistency (coefficient alpha = 0.72), and they cluster into one factor. In this study, the internal reliability was 0.72.

- *Self-control schedule* (Rosenbaum, 1980) was used to measure subjects’ learned resourcefulness. This is a 36-item scale designed to assess (a) the use of cognitions and ‘self-statements’ to control emotional and physiological responses such as anxiety, pain, anger, boredom, (b) the application of problem-solving procedures (e.g. planning, problem definition, evaluating alternatives, anticipation of consequences), (c) the delay of immediate gratification (e.g. exploring alternatives before making a decision), and (d) perceptions of self-efficacy. Psychometric analyses based on data from four samples of Israeli students, one sample of US students and one sample of Israeli men indicated alpha coefficients ranging from 0.78 to 0.84, with a mean of 0.81, and test–retest reliability over a period of 4 weeks of $r = 0.86$, $p < 0.01$, suggesting that the SCS scores are quite stable in the absence of any sort of intervention (Rosenbaum, 1980). The Cronbach alpha in this study was 0.82.
- *The general health questionnaire 30* (Goldberg, 1978), an instrument used extensively in the detection and estimation of psychological strain, incorporates items pertaining to depression, anxiety, somatic symptoms and social dysfunction. The scale has been widely validated (see Goldberg (1978) for data from 29 validity studies), and has the benefit of having been used extensively in occupational studies, thereby yielding considerable comparative data (e.g. Wall & Clegg, 1981). In this study, the Cronbach alpha was 0.94.

3. Results

The Pearson product moment correlation coefficients are shown in Table 4. For conceptual simplicity, we present zero-order correlations. A statistically significant positive correlation was found between subjects’ CoPos on the one hand and motivation and learned resourcefulness on the other, whilst significant negative relationships were found between CoPos and psychological

Table 4
Pearson product moment correlations between FSASQ and other variables^a

	CoPos	CoNeg
Intrinsic motivation	0.23*	0.12
Intention to quit	−0.24*	0.04
Learned resourcefulness	0.50***	−0.07
Psychological strain	−0.27*	−0.13

^a Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; one-tailed; $n = 52$.

strain as well as intention to quit. In other words, as subjects' CoPos increased, so too did their motivation and learned resourcefulness, whilst their psychological strain and intention to leave the organization decreased. Thus the relationships were in the hypothesized direction.

It is notable that, contrary to the predictions of the RLH theory, but consistent with UK studies of attributional style (Furnham et al., 1992; Corr & Gray, 1995c), attributions for positive events were more strongly related to job-associated psychological variables than were the attributions for negative events. Furthermore, the correlation coefficients were approximately the same size as those found in the above studies. These results provide further evidence of the validity of the FSASQ.

4. Discussion

Analysis of the psychometric properties of the 16 item domain-specific attributional style questionnaire has yielded encouraging results. The scale has good internal reliability for both the composite scores CoPos and CoNeg. In fact, the scale demonstrates stronger internal consistency than its parent, the ASQ, a reflection perhaps of its more homogeneous, domain-specific nature. Factor analyses confirm that the items comprising the three positive subscales (internality, globality and stability) cluster into one factor and the items comprising the three negative subscales cluster into a second factor, together accounting for 76% of the variance. As far as validity is concerned, the FSASQ possesses more than an adequate degree of convergent validity with the ASQ, and it correlates with a number of job-associated psychological variables, to which it might theoretically be expected to relate. Interestingly, it is the attributions for positive events rather than negative events that were more strongly related to the psychological variables. This is consistent with other UK studies of attributional style and in contrast to US studies, which leads to conjecture about possible cultural differences being at the root of the difference.

Our data are necessarily preliminary, based as they are on relatively small sample sizes. However, they encourage our thinking that domain-specific measures of attributional style are useful and do correlate with important work variables, in our study: intrinsic motivation, intention to quit, learned resourcefulness and psychological strain. There is much *theoretical* multicollinearity in such occupational measures, so at this preliminary stage of analysis, it would not be prudent to attempt to tease apart *statistically* the relative contribution of attributional style to each of these work variables, especially given our small sample sizes. A much larger study would be required to test adequately its unique contribution to work measures.

The present data point to some issues that future research should address. Specifically, the relationship of positive, but not negative, items to work variables needs further investigation. Further, our set of correlations show that CoPos is positively related to resourcefulness and motivation, as predicted by the revised attributional theory of depression (Needles & Abramson, 1990). Interestingly, CoPos, and not CoNeg, is related (negatively) to psychological strain. Speculatively, it might be argued that the negative aspects of insurance selling are motivated by the frustration of the dominant cognitive style of successful salespeople, viz. reward-orientation. A high level of CoPos is thus necessary to reduce the frustrations that are commonplace in the daily life of salespeople. In this regard, it would be interesting to examine whether high CoPos salespeople deal with failure by focusing on potential successful business, that is, they deflect the arrows of failure by becoming more resourceful. In contrast, salespeople relatively low on CoPos may not be so able to persevere with potential successful business because of their relatively low level of reward-orientation and motivation. If confirmed, this suggestion would indicate that one way to overcome the potentially demotivating effects of exposure to failure is to immediately turn ones' attention to success. Naturally, such a skill needs to be learned, and we have separately demonstrated that this is achievable as part of a larger cognitive-behavioural programme designed to enhance psychological resilience in individuals engaged in demanding activities such as insurance sales (e.g. Proudfoot et al., 1997, submitted).

Lastly, despite the encouraging results for the FSASQ, further analysis is also necessary here. Specifically, the issue of validity needs to be addressed more fully. A study is needed to assess whether the scale correlates with other measures to which it should theoretically relate.

Given the hypothesis underlying the development of this attributional style measure — namely that attributional style is related to occupational success and, by default, negatively related to turnover, it is predicted that the FSASQ will correlate with measures of productivity in the financial services industry, such as business sold, commission earned, as well as with actual employee turnover. Further work is needed to test this hypothesis.

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