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Explanatory Style as a Predictor of Productivity and Quitting Among Life Insurance Sales Agents

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The reformulated learned helplessness model claims that the tendency to explain bad events by internal, stable, and global causes potentiates quitting when bad events are encountered. We tested this prediction in the work setting with individuals who frequently experience bad events. Explanatory style, as measured by the Attributional Style Questionnaire (ASQ), correlated with and predicted the performance of life insurance sales agents. In a cross-sectional study of 94 experienced agents, individuals scoring in the top half of the ASQ sold 37% more insurance in their first 2 years of service than those scoring in the bottom half. In a prospective 1-year study of 103 newly hired agents, individuals who scored in the top half of the ASQ when hired remained in their job at twice the rate and sold more insurance than those scoring in the bottom half of the ASQ. These two studies support the claim that a pessimistic explanatory style leads to poor productivity and quitting when bad events are experienced, and extend the usefulness of the ASQ to the workplace.

According to the reformulation of the learned helplessness model, individuals with a "pessimistic" explanatory style are more likely to display helplessness deficits when confronted with a bad event than individuals with an "optimistic" explanatory style (Abramson, Seligman, & Teasdale, 1978; Seligman, Abramson, Semmel, & von Baeyer, 1979). Individuals who habitually construe the causes of bad events as internal, stable, and global ("it's my fault, it's going to last forever, and it's going to undermine everything I do") should, when they experience bad events, be more susceptible to helplessness deficits than those with the opposite style. Peterson and Seligman (1984) reviewed 12 studies that confirm this model by finding depressive deficits associated with a pessimistic explanatory style in students, depressed patients, prisoners, and children.

Here we report two field studies of this model, using a theoretically relevant population, life insurance sales agents, and investigate a central helplessness deficit—quitting. These studies have two purposes: First, they test the Abramson et al. (1978) model, in which the pessimistic explanatory style predisposes giving up, and the rejections inherent in selling life insurance trigger giving up when this disposition is present. The interaction of the pessimistic explanatory style and of the rejections, though neither necessary nor sufficient conditions, increases the likelihood of helplessness deficits. This is a species of a *diathesis-stress* model, in which the *diathesis,* though probably not constitutional, is a pessimistic explanatory style, and the *stress* is repeated failures. Second, we extend the test of learned helplessness and explanatory style to performance in the workplace.

Selling life insurance is a job particularly suitable for the investigation of learned helplessness and explanatory style. Sales agents repeatedly encounter failure, rejection, and indifference from prospective clients. Consequently, the turnover rate among life insurance agents is very high (as are the training costs). Studies by the Life Insurance Marketing Research Association (LIMRA, 1983) have found that 78% of the life insurance agents hired in the United States quit within 3 years of service. We predicted that individuals with an optimistic explanatory style will weather such a challenging job better.

In these studies we measured explanatory style with the Attributional Style Questionnaire (ASQ; Peterson et al., 1982; Seligman et al., 1979). Helplessness deficits were operationalized by two objective performance measures: survival and productivity. *Survival* represents whether the agent is still working or has quit after a specified period of time. *Productivity* is the commission earned by the agent, calculated as a fixed percentage of the revenues generated from the sale of a life insurance policy.

The learned helplessness model (Seligman, 1975) predicts that uncontrollable failure will be followed by lowered response initiation. In the job of selling insurance, this translates into fewer sales attempts, less persistence, and the ultimate learned helplessness measure, quitting. The reformulated learned helplessness model (Abramson, et al., 1978) specifies which individuals are more vulnerable and which are more resistant to these deficits when failure is encountered. Individuals with a vulnerable explanatory style will tend to explain the cause of their failure as more internal, stable, and global. They will therefore blame themselves and expect failure to recur over a longer period of time and in more situations. Consequently, they will suffer more self-esteem deficits, and response initiation deficits will be more sustained in time and across situations than for individuals with the opposite explanatory style. So, we predicted that individuals who habitually explain failure with internal, stable, and global

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causes would initiate fewer sales attempts, be less persistent, produce less, and quit more frequently than those with a more optimistic explanatory style.

Study 1: Cross-Sectional

Method

Subjects. Eleven hundred Attributional Style Questionnaires, along with postpaid return envelopes, were distributed to the entire sales force of the Pennsylvania region of the Metropolitan Life Insurance Company. A letter from the regional manager encouraging voluntary participation but assuring sales agents that taking it or not would in no way affect their job status, accompanied the questionnaire. One hundred sixty-nine questionnaires were returned completed, and accurate quarterly production data (in dollar figures) was available for 94 of these agents up until that time in their career. The company keeps accurate computerized production records for the purpose of compensating agents. We analyzed the synchronous correlation of explanatory style with production for these 94 agents.

Is this sample of 94 representative of the 1,100 agents in the Pennsylvania region? Because the return rate was so meager, our main concern was that there might be systematic production differences between the respondents and the nonrespondents. The mean quarterly production figures were slightly higher for the respondents (2,620), but not significantly so from the mean for the entire region (2,500; t test $p < .45$).

Questionnaires. The sales agents took the Attributional Style Questionnaire (ASQ; Peterson et al., 1982; Seligman et al., 1979). This self-report instrument yields scores for explanatory style for bad events and good events using three causal dimensions—internal versus external, stable versus unstable, and global versus specific causes. The format reflects the fact that we wanted to assess how respondents view themselves along a continuum for each of the three dimensions. We ask subjects to generate their own cause for a series of hypothetical events, and then to rate that cause along 7-point scales corresponding to the internality, stability, and globality dimensions. The ASQ does not create or constrain the causal explanations provided by the subject, but at the same time it allows simple and objective quantification of responses by asking the subject to rate the internality, stability, and globality of the causes.

The questionnaire is group or individually administered, and the following directions appear on the first page of the booklet:

> Please try to vividly imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one—the major cause if this happened to you. Please write this cause in the blank provided after each event. Next, we want you to answer some questions about the cause. To summarize, we want you to:
>
> 1. Read each situation and vividly imagine it happening to you.
> 2. Decide what you feel would be the major cause of the situation if it happened to you.
> 3. Write one cause in the blank provided.
> 4. Answer three questions about the cause.
> 5. Go on to the next situation.

Because we are interested in style—cross-situational explanations—we describe 12 different hypothetical events. Half are good events (e.g., you meet a friend who compliments you on your appearance), and half are bad events (e.g., you go out on a date and it goes badly). After each event are questions about the cause. First, the subject is asked to write down the one major cause of the event. Then the subject is asked to rate the cause along the three explanatory dimensions.

The agents' scores on the Aptitude Index Battery (AIB; LIMRA, 1982), now called the Career Profile, were also available. The AIB is a self-report questionnaire that asks the applicant undisguised questions in six major areas: self-assessment of job relevant skills and abilities, career expectations, motivating goals, concerns about career, satisfaction with present job, and potential clients. This selection instrument is widely used throughout the insurance industry. Scores on the AIB match the profile of the applicant to the profiles of successful insurance agents, and applicants are hired if they match such actuarial profiles well, or if they match them marginally but do well in interviews.

Dependent measures. We used three composite scores derived from the ASQ: composite negative attributional style (CoNeg), which is the composite score for the six negative events, summing across internal, stable, and global dimensions; composite positive attributional style (CoPos), the composite score for the six positive events; and a total score, composite positive minus composite negative (CPCN), the difference score between CoPos and CoNeg. Past research (Peterson & Seligman, 1984) indicates that CoNeg and CPCN are the most valid empirical predictors of depressive deficits. The AIB yields a single composite score that represents the applicant's likelihood to succeed as an insurance sales agent.

Productivity is measured by the agent's quarterly commissions, in dollars, for the first eight quarters (2 years) of the agent's employment. Because we used a cross-section of agents, however, not all agents had 2 years of service for which we could obtain production data. This measure is directly proportional to and perfectly correlated with the amount of insurance sold in that period. Commissions for renewals of previously sold policies are excluded from the productivity figures, because it is believed that the first-time sale of a policy requires more motivation than the renewal of a currently held policy.

Procedure. The agents took the AIB before they were hired. We administered the ASQ after they were hired and had accumulated experience selling insurance for Metropolitan ranging from several months to several decades. Local managers distributed the ASQ to the agents, to be taken at their leisure. The questionnaire requires about 20 min to take. The agents returned it directly to our research group, not to Metropolitan, in individual postpaid preaddressed envelopes.

Results

Do agents with an optimistic explanatory style sell more insurance than agents with a pessimistic style? The answer is yes.

Distribution and reliability. The composite ASQ scores had the following means and standard deviations: CoNeg $M = 12.00$, $SD = 2.42$; CoPos $M = 17.43$, $SD = 1.83$; CPCN $M = 5.42$, $SD = 2.92$. These statistics resemble those of undergraduate student populations. The reliabilities, as estimated by Cronbach's alpha (1951), were modest: .75 for CoNeg and .62 for CoPos. There were no significant differences in ASQ scores for men versus women (CoNeg $t = .26$, *ns*; men did slightly better), and no significant differences by length of service (CoNeg $r = .02$, *ns*), indicating that experienced sales agents did not have a better explanatory style than new agents.

The ASQ and productivity. CoNeg correlated significantly with the first 2 years of production ($r = -.18$, $p < .07$), the first year alone ($r = -.19$, $p < .07$) and the second year of production ($r = -.39$, $p < .01$). Agents who scored in the top half of the CoNeg, using the median cutoff, sold 37% more insurance in their first 2 years of service than agents who scored in the bottom half ($t = 2.19$, $p < .02$). (The t and p statistics refer to t test analyses on the difference in production means.) More selective CoNeg cutoffs reveal more striking results. Agents who scored in the top decile of CoNeg sold 88% more insurance in their first 2 years than those who scored in the bottom decile 10% ($t = 2.17$, $p < .03$). Furthermore, CoNeg discriminated the high and low producers even better in their second year of service than in

Table 1
Cross-Sectional Study: Top Half Versus Bottom Half of the Sales Force on CoNeg and Their Productivity

CoNeg score	*n*	Quarterly production average	*t*	*p*	Superiority in production
Production average: First and second year					
Good CoNeg ≤ 11.83	40	3,105	2.19	.02	37%
Bad CoNeg ≥ 12.00	55	2,270			
Production: First year					
Good CoNeg ≤ 11.83	39	2,762	1.37	.01	29%
Bad CoNeg ≥ 12.00	54	2,142			
Production: Second year					
Good CoNeg ≤ 11.83	15	6,242	1.96	.03	130%
Bad CoNeg ≥ 12.00	24	2,716			

Note. CoNeg = Composite negative attributional style. Good CoNeg = Optimistic attributional style for bad events. Bad CoNeg = Pessimistic attributional style for bad events. All *t* test results are one-tailed.

their first year. Agents who scored in the top half of CoNeg sold 29% more insurance in their first year ($t = 2.37$, $p < .01$) and sold 130% more insurance in their second year ($t = 1.96$, $p < .03$) than agents who scored in the bottom half. Tables 1 and 2 present different CoNeg cutoffs and the associated production differences.

CPCN did not significantly discriminate productivity at the median division but did discriminate by quartile and decile. Agents scoring in the top half were 9% more productive in the first 2 years than those in the bottom half ($t = .63$, *ns*). The top quartile was 36% more productive in the first 2 years than the bottom quartile ($t = 1.72$, $p < .05$), and the top decile was 67% more productive than the bottom decile ($t = 1.77$, $p < .05$). CoPos did not correlate significantly with production.

The AIB and productivity. The industry wide test, the AIB, did not correlate significantly with the first 2 years of production ($r = .12$, *ns*). It is important to note that the distribution of the agents' AIB scores in our sample was highly skewed, because most applicants with low AIB scores are not hired and therefore did not find their way into our pool. Some agents with marginal AIB scores are hired because Metropolitan allows its branch managers to hire people with marginal scores, if they look very promising in interviews. The distribution of ASQ scores was not skewed (the population had not been preselected by ASQ), and ASQ scores did not correlate significantly with AIB scores (CoNeg $r = .09$, *ns*; CPCN $r = -.09$, *ns*). Each questionnaire, therefore, appears to measure different characteristics and they are not redundant.

We used the cutoff score that at the time represented the "passing" AIB score for the total Metropolitan applicant population (greater than or equal to 11). Agents who scored above this AIB figure sold 32% more insurance in their first 2 years than those scoring below it ($t = 2.15$, $p < .02$). The AIB, however, did not significantly discriminate production at the median cutoff of this sample (greater than or equal to 13).

The two tests together discriminated the more productive from the less productive agents better than either test alone. Agents who scored in both the upper half (above the median) of the ASQ and above the AIB passing score sold 43% more in their first 2 years, 29% more in their first year, and 196% more in their second year than agents who scored in both the lower half of the ASQ and below the AIB passing score (all *ps* < .05).

Discussion

Agents who scored in the optimistic half of explanatory style sold 37% more insurance than agents scoring in the pessimistic half. Agents in the top decile sold 88% more insurance than

Table 2
Top Decile Versus Bottom Decile of the Sales Force on CoNeg and Their Productivity

CoNeg score	*n*	Quarterly production average	*t*	*p*	Superiority in production
Production average: First and second year					
Good CoNeg ≤ 9.17	11	3,526	2.17	.03	88%
Bad CoNeg ≥ 15.17	10	1,874			
Production: First year					
Good CoNeg ≤ 9.17	10	3,087	2.24	.02	57%
Bad CoNeg ≥ 15.17	9	1,962			
Production: Second year					
Good CoNeg ≤ 9.17	2	15,320	1.69	*ns*	638%
Bad CoNeg ≥ 15.17	5	2,076			

Note. CoNeg = Composite negative attributional style. Good CoNeg = Optimistic attributional style for bad events. Bad CoNeg = Pessimistic attributional style for bad events. All *t* test results are one-tailed.

those in the bottom decile. Because these results are cross-sectional, there are several possible interpretations of the relation between explanatory style and productivity. First, it may be that an optimistic explanatory style predicts and precedes successful job performance. Second, and less interesting, is that success may alter explanatory style in the optimistic direction. Third, some third variable may produce both an optimistic explanatory style and job success. Study 2 tests between the first and second interpretation by measuring explanatory style on hiring and then looking at sales performance over the first year of work.

Study 2: Prospective

Method

Subjects. One hundred four sales agents were hired by Metropolitan in the Pennsylvania region in the spring of 1983. At the outset of a training course and after hiring, but before any sales experience with Metropolitan, they took the ASQ. There was 100% compliance, even though subjects were informed that the test results would in no way affect their job status.

Procedure. Subjects took the ASQ as well as the AIB. We then obtained the quarterly commissions (which are directly proportional to the amount of insurance sold) for the first four quarters (1 year) that followed for 103 of the 104 new agents. In the first study, we could not collect information on the theoretically most central variable—quitting—because only agents still working took the ASQ. In Study 2, we collected information on who still remained with Metropolitan at the end of their first year.

Results

Explanatory style significantly predicted first year survival as well as productivity for the second half of the year. It did not significantly predict productivity for the first half of the year.

Distribution and reliability. The means and standard deviations of the three ASQ composite scores were as follows: CPCN $M = 6.24$, $SD = 2.56$; CoNeg $M = 11.52$, $SD = 2.10$; CoPos $M = 17.77$, $SD = 1.66$. There were no significant differences in CPCN score by sex ($t = .18$, *ns*; males did slightly better) or race ($t = .48$, *ns*; minorities did slightly better), although the sample size of minorities is too small to be conclusive. Agents who had experience selling insurance prior to their employment with Metropolitan had slightly better CPCN scores than those without prior experience ($t = 1.62$, $p < .05$). The reliabilities of the composites, as computed by Cronbach's (1951) alpha, were again modest: .71 for CoPos and .66 for CoNeg.

We present the results only for the CPCN measure, the one score that takes all the test responses into account. Results for CoPos and CoNeg were each moderately significant predictors, but highly significant when combined to form the CPCN score.

ASQ predictions: Survival. Do agents with an optimistic explanatory style survive longer than those with a pessimistic explanatory style? Agents who scored in the optimistic half of CPCN survived at twice the rate as agents who scored in the pessimistic half. There were 42 survivors and 59 dropouts in the sample of 101 sales agents for whom we have status information. Of the 42 survivors, 67% ($n = 28$) scored in the top half of CPCN, 33% ($n = 14$) in the bottom half, $\chi^2(1, N = 42) = 6.63$, $p < .005$. Quartile comparisons produced an even more accurate prognosis. The upper quartile of CPCN survived at almost 3 times the rate of the lower quartile. Of the 19 survivors who scored in either the upper or the lower quartile of CPCN, 74% ($n = 14$) scored in the upper quartile, 26% ($n = 5$) in the lower quartile, $\chi^2(1, N = 19) = 8.37$, $p < .002$. Table 3 presents the survival rates as a function of the ASQ and AIB cutoffs.

The AIB also predicted survival significantly at its median cutoff, as shown in Table 3. Of the 41 survivors for whom AIB scores were available, 68% scored in the upper 57% of AIB and 32% scored in the lower 43%, $\chi^2(1, N = 41) = 4.96$, $p < .01$. (The distribution of AIB scores did not yield an exact median.) The comparison between upper versus lower quartile on the AIB revealed no significant difference in survival rate.

The ASQ and AIB together predicted survival better than either test alone. Of the 25 survivors who scored in either the top half of both tests or in the bottom half of both tests, 80% ($n = 20$) of these survivors scored in the top half of both and 20% ($n = 5$) scored in the bottom half of both, $\chi^2(1, N = 25) = 9.56$, $p < .001$. Thus the survival rate was 4 times as high for those who scored well on both the ASQ and AIB as for those who scored poorly on both. Regression analyses suggested that the prediction of survival was due mainly to the ASQ, not to the AIB. CPCN significantly predicted survival ($F = 5.72$, $p < .02$) controlling for AIB, but AIB did not significantly predict survival ($F = .51$, *ns*) controlling for ASQ.

ASQ predictions: Productivity. Do agents who scored well on the ASQ sell more insurance than those who scored poorly? There are two ways of measuring production. One is to include production for the agents who have dropped out by entering a zero

Table 3
Prospective Study Survival Rates

CPCN score	Percent survivors	Percent dropouts	χ^2	*p*
Distribution of survivors by top half versus bottom half of CPCN[a]				
Good CPCN ≥ 6.33	67 (28/42)	41 (24/59)	6.63	.005
Bad CPCN ≤ 6.17	33 (14/42)	59 (35/59)		
Total	100%	100%		
Distribution of survivors by top quartile versus bottom quartile of CPCN				
Good CPCN ≥ 8.17	74 (14/19)	31 (9/29)	8.37	.002
Bad CPCN ≤ 4.00	26 (5/19)	69 (20/29)		
Total	100%	100%		
Distribution of survivors by top 57% versus bottom 43% of AIB				
Good AIB ≥ 13	68 (28/41)	46 (26/57)	4.96	.01
Bad AIB ≤ 12	32 (13/41)	54 (31/57)		
Total	100%	100%		
Distribution of survivors by top 22% versus bottom 22% of AIB				
Good AIB ≥ 16	53 (10/19)	46 (11/24)	.20	*ns*
Bad AIB ≤ 10	47 (9/19)	54 (13/24)		
Total	100%	100%		

Note. Numbers in parentheses represent the number of survivors (or dropouts) falling within the test score range out of the total number of survivors (or dropouts). Good CPCN = Optimistic attributional style for good and bad events. Bad CPCN = Pessimistic attributional style for good and bad events. AIB = Aptitude Index Battery.
[a] All chi-square results are one-tailed.

Table 4
Prospective Study: Top Half Versus Bottom Half of Sales Force on CPCN and Their Productivity (Excluding Dropouts' Production)

CPCN score	*n*	Quarterly production average	*t*	*p*	Superiority in production
Production: First year					
Good CPCN ≥ 6.33	47	2,268	1.06	*ns*	14%
Bad CPCN ≤ 6.17	45	1,993			
Production: First 6 months					
Good CPCN ≥ 6.33	47	2,295	.65	*ns*	9%
Bad CPCN ≤ 6.17	45	2,109			
Production: Second 6 months					
Good CPCN ≥ 6.33	35	2,617	1.55	.06	25%
Bad CPCN ≤ 6.17	33	2,096			

Note. CPCN = Composite positive minus composite negative score. Good CPCN = Optimistic attributional style for good and bad events. Bad CPCN = Pessimistic attributional style for good and bad events.

for each quarter of production after the individual drops out. This measures the total economic worth of the individual to the company in the first year, but confounds the effect of quitting with the production of those still working. The second measure of production removes the dropouts from the analysis as they drop out. Both measures similarly showed that an optimistic ASQ score predicted better productivity in the second half of the year, but not for the first half of the year.

CPCN correlated moderately with the second 6 months of productivity when dropouts were included ($r = .17$, $p < .09$) and significantly when dropouts were excluded ($r = .27$, $p < .03$). CPCN did not correlate significantly with the first 6 months of production. Agents who scored in the top half of CPCN sold 35% more life insurance in their second 6 months than those who scored in the bottom half when zeroes were entered for dropouts' production ($t = 1.50$, $p < .07$); when dropouts were omitted, the top half of CPCN sold 25% more than the bottom half ($t = 1.55$, $p < .06$). In accordance with the findings of the cross-sectional study, more stringent ASQ cutoffs yielded larger productivity differences. Agents who scored in the top quartile of CPCN sold 73% more in the second 6 months than those in the bottom quartile when zeroes were entered for dropouts' production ($t = 1.80$, $p < .04$); when dropouts were excluded, the top quartile of CPCN sold 57% more than the bottom quartile ($t = 2.05$, $p < .02$). The rationale behind analyzing the second 6 months separately from the first 6 months is that it is not until after the first few months, when agents are still undergoing training to acquire the specialized sales skills and knowledge, that differences in motivation should account for the differences in productivity.

When the entire first year production was examined, agents in the top half of CPCN sold 20% more than those in the bottom half, with zeroes entered for dropouts' production ($t = 1.18$, *ns*); when dropouts were excluded, the top half sold 14% more than the bottom half ($t = 1.06$, *ns*). The top quartile sold 50% more in the first year than did the bottom quartile when zeroes were included ($t = 1.75$, $p < .04$) and sold 40% more when dropouts were excluded ($t = 1.92$, $p < .03$). See Tables 4 and 5 for details.

The Aptitude Index Battery did not significantly correlate with first year production when dropouts were included ($r = .15$, $p < .14$) but did when dropouts were excluded ($r = .19$, $p < .07$). AIB predictions were significant at the median split, but not at more selective cutoffs. For the first 6 months, agents in the top half of AIB sold 34% more than those in the bottom half when zeroes were entered for dropouts' production ($t = 2.03$, $p < .02$), and sold 38% more when dropouts were omitted ($t = 2.53$, $p < .007$). For the second 6 months, agents who scored in the top half of the AIB sold 51% more than those in the bottom half with zeroes included ($t = 1.95$, $p < .03$) and 37% more when dropouts were excluded ($t = 2.14$, $p < .02$).

Table 5
Prospective Study: Top Quartile Versus Bottom Quartile of Sales Force on CPCN and Their Productivity (Excluding Dropouts' Production)

CPCN score	*n*	Quarterly production average	*t*	*p*	Superiority in production
Production: First year					
Good CPCN ≥ 8.17	21	2,689	1.92	.03	40%
Bad CPCN ≤ 4.00	23	1,915			
Production: First 6 months					
Good CPCN ≥ 8.17	21	2,659	1.53	.07	33%
Bad CPCN ≤ 4.00	23	2,004			
Production: Second 6 months					
Good CPCN ≥ 8.17	16	3,024	2.05	.02	57%
Bad CPCN ≤ 4.00	17	1,929			

Note. CPCN = Composite positive minus composite negative score. Good CPCN = Optimistic attributional style for good and bad events. Bad CPCN = Pessimistic attributional style for good and bad events.

Table 6
Prospective Study: Productivity of Sales Force in Top Half of Both Tests Versus Bottom Half of Both Tests (Excluding Dropouts' Production)

Scores	*n*	Quarterly production average	*t*	*p*	Superiority in production
Production: First year					
Good CPCN ≥ 6.33 and Good AIB ≥ 13	30	2,500	2.49	.008	56%
Bad CPCN ≤ 6.17 and Bad AIB ≤ 12	22	1,598			
Production: First 6 months					
Good CPCN ≥ 6.33 and Good AIB ≥ 13	30	2,558	1.94	.03	46%
Bad CPCN ≤ 6.17 and Bad AIB ≤ 12	22	1,754			
Production: Second 6 months					
Good CPCN ≥ 6.33 and Good AIB ≥ 13	23	2,803	3.04	.002	75%
Bad CPCN ≤ 6.17 and Bad AIB ≤ 12	16	1,607			

Note. CPCN = Composite positive minus composite negative score; AIB = Aptitude Index Battery. Good CPCN = Optimistic attributional style for good and bad events. Bad CPCN = Pessimistic attributional style for good and bad events.

Both tests together predicted productivity better than either test alone. For the first half of the year, agents who scored in the top half of both tests sold 37% more insurance than agents who scored in the bottom half of both tests with zeroes entered ($t = 1.57$, $p < .06$), and sold 46% more when dropouts' production was omitted ($t = 1.94$, $p < .03$). For the second half of the year, agents who scored in the top half of both tests sold 99% more than did the agents who scored in the bottom half of both tests with zeroes entered ($t = 2.40$, $p < .01$); 75% more when dropouts' production was omitted ($t = 3.04$, $p < .002$). See Table 6 for details.

Regression analyses further indicated that both tests together predicted second 6 months' productivity more significantly than either test alone. By omitting dropouts, CPCN significantly predicted second 6 months' productivity ($F = 7.03$, $p < .01$) controlling for AIB, AIB significantly predicted productivity ($F = 3.93$, $p < .05$) controlling for CPCN, and the two-variable model predicted productivity even more significantly ($F = 6.12$, $p < .004$). Regression analyses also revealed that the two tests together were more significant predictors of first year production than either test alone when dropouts' production was included ($F = 2.47$, $p < .09$) and when it was excluded ($F = 3.79$, $p < .03$).

General Discussion

We undertook two field studies of an occupation in which frequent failure is inevitably met to test whether explanatory style predicts work productivity and quitting. So challenging are these experiences that the dropout rate for our sample was 58% in the first year.

Four major findings emerged from the prospective study. First, agents who had an optimistic explanatory style, as measured by the ASQ, survived at a significantly higher rate than agents with a more pessimistic explanatory style. Second, agents with an optimistic style sold more insurance than agents with a pessimistic style. Third, explanatory style predicted survival and production as well, and nonredundantly, as the traditional industry test. Fourth, both tests together predicted survival and productivity better than either test alone.

These results follow from the reformulated helplessness model of depression (Abramson et al., 1978). Individuals who believe that bad events are internally, stably, and globally caused (and conversely for good events) will be less persistent after failure than those with the opposite explanatory style. The theoretical significance of these findings is that they support the reformulation's claim that a bad explanatory style predisposes to poor performance, and poor performance is then triggered by failure in those individuals with the predisposing style. The interaction of the two components increases the likelihood of helplessness deficits, here operationalized by quitting and poor productivity. These results suggest that a depressogenic explanatory style predicts performance deficits in a work setting, beyond the clinical syndrome of depression, wherein it has most often been tested.

These findings do not rule out the likelihood of bidirectional effects of bad explanatory style and failure (e.g., Bandura, 1978). On this view, a bad explanatory style leads to more failure, and failure may also cause a deterioration in explanatory style. Conversely, a good style results in more success, and success may enhance explanatory style. So, for example, an agent with a good explanatory style might persist more and make more sales. Eventually, such an excess of sales will make him or her more optimistic and feedback to an even better explanatory style. Such bidirectional effects have been found previously in studies of the mutual effects of explanatory style and depression (see Peterson & Seligman, 1984, for a review) and are likely to exist with job productivity and explanatory style. The present study is not fine grained enough to measure such reciprocal effects, but a design in which waves of measurement of explanatory style and productivity are taken across time should illuminate the issue.

One practical implication of these findings lies in the possibility of identifying, in advance, individuals who are particularly suitable or unsuitable for work that entails frequent failure or rejection. Matching the right explanatory style "profile" to the work requirements should be useful both to the individual and

the organization. Steering vulnerable individuals away from positions that are characteristically fraught with adversity or engaging them in remedial attributional training would also be a useful service. The fact that explanatory style significantly correlates with and predicts job performance suggests that the measurement of explanatory style could make the process of personnel selection more accurate.

Because we used a natural job setting, we forfeited some of the control we have in laboratory studies of helplessness and explanatory style. Specifically, in the laboratory we can control the timing and amount of failure. In the work setting, we cannot control or easily measure day-to-day failures and rejections. By measuring such naturally occurring failure along with explanatory style, future research may gain a clearer picture of the process of giving up in the workplace.

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