
PSYCHOLOGICAL ANTECEDENTS OF WORK ROLE PERCEPTIONS: BUSINESS FOUNDERS AND MANAGERS

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One tradition of entrepreneurial research has as its focus the evaluation of factors that influence entrepreneurial careers. The factors identified can be classified into three categories:

1. Psychological factors, such as need achievement [27] and control beliefs [37];
2. Personal factors, such as exposure to entrepreneurial role models [7] and previous work experiences [40]; and
3. Environmental factors, such as capital availability [8] and skill level of the local labor market [13].

This article is intended to extend the literature on the psychological characteristics of entrepreneurs beyond its traditional focus. The thrust of that line of inquiry has been to identify the characteristics which people who pursue an entrepreneurial venture from those that engage in other forms of enterprise. Much less attention has been directed toward understanding how these psychological factors affect the managerial behavior of entrepreneurs as they operate their ventures after the start-up phase. It will be argued here that the psychological makeup that prompted the founding of a business also has a predictable affect on the work roles that are emphasized in the management of the firm.

First, prior research on the psychological factors associated with entrepreneurs and the research on managerial work roles are reviewed. Second, our method and data describing the differences in work role perceptions among a group of business founders and a group of business managers are presented. Finally, those differences are discussed in light of the well-documented psychological differences between the two groups.

Prior Research

Research on the Psychology of Entrepreneurs

Mill [28] has been credited with bringing the term entrepreneur to general use. Inherent in his definition was the notion of risk-taking behavior as a characteristic which

separated entrepreneurs from the general population. Schumpeter [39] brought the concepts of innovation and creativity to early attempts at defining the entrepreneur. While these and other early writers clearly had psychological traits in mind, it is the work of McClelland ([26], [27]) which provided direction and rigor to this line of research.

Today, the two most widely-recognized psychological characteristics of entrepreneurs are need for achievement and locus of control beliefs. McClelland's early work established the need achievement construct as an important component of the psychological set of the entrepreneur. High achievement need is associated with a desire to possess personal responsibility for problem solving and the desire to reach goals through individual effort. Such individuals also have a strong desire to know how they are performing on the tasks they have chosen.

Rotter's work [37] similarly established and stimulated research on the locus of control construct. Entrepreneurs exhibit an *internal* belief in the locus of control. That is, they believe that they can influence the events in their lives and the rewards they obtain. The *external*, on the other hand, attributes much of what occurs to luck, fate, and other such forces outside an individual's control. This construct has been employed in a variety of studies, with results indicating that internals are more satisfied with work, show greater motivation, performed better under stressful conditions, and were more innovative ([18], [29], [38], [48]). Further, a series of studies have confirmed that entrepreneurs hold internal locus of control beliefs ([2], [22], [35]).

While these are accepted components of the entrepreneur's psychological set, it is important to view them as antecedents to the entrepreneur's approach to managerial work. In this study, differences in the perceived importance of various managerial work roles between CEOs who are owner-managers and CEOs who are nonowner-managers are evaluated in light of locus of control and need achievement differences. The objective is to determine if observed differences in work role orientation can be traced back to known psychological differences.

Research on Work Behavior of Entrepreneurs

Recognizing that entrepreneurs possess a distinctive set of psychological traits, a related stream of research sought to identify behavioral differences between entrepreneurs and managers of businesses. These results can be organized around three themes: differences in planning and goal-setting orientation; differences in management styles; and the development of taxonomic schemes which capture a host of characteristics.

Goals have been found to be vague, inadequately defined, and short-ranged ([9], [10]). A growth orientation also appears to separate entrepreneurial from "managed" firms ([4], [14]). Recent work by Mintzberg and Waters [33] discussed the role of personal vision of the entrepreneur regarding the future of the firm. This is consistent with the view of goals being vague and poorly articulated, and dominated by personal values [17].

Management style differences have been explored in another set of studies. The use of strategic management techniques [4] and boundary-spanning activities ([12], [15]) have been related to entrepreneurs. Calculated risk-taking and a bias toward developing activities within the firm have also been identified as a part of the entrepreneur's behavioral repertoire [45].

In light of the complex array of motives and behaviors that compose this phenomenon of entrepreneurship, several authors sought to classify these people into types of entrepreneurs. Each proposed type captured a "gestalt" of perceptions and actions. Boswell [1] classified four types of entrepreneurs:

Innovator – favoring growth and self-realization.

Proprietor – interested in maintaining control and financial independence.

Technician – inclined toward technical efficiency, productivity, and profits over growth.

Artisan – favoring personal independence and survival over economic success.

Smith and Miner [42] classify two types: craftsman and opportunistic, which has been supported in several other studies ([2], [23], [44]). Another typology developed by Filley and Aldag [16] is also supportive of the craftsman/opportunistic distinction.

While each of the above studies provides insight to the work behaviors of entrepreneurs, they rarely deal with specific actions that might be undertaken in the course of managing a firm. The typologies and goal orientations do point to a predilection for certain actions. However, the domain of feasible actions within any typological classification is quite broad. For example, a technician in Boswell's taxonomy might be expected to monitor raw material consumption and personally negotiate with vendors – all in an effort to improve productivity.

Because the intent of the present study is to relate psychological traits to aspects of managerial behavior, this article relies on the managerial work role literature. That literature offers a more detailed partitioning of work activities.

Method

Managerial Work Roles

Several categorizations of managerial work roles are available in the literature. Perhaps the best-known is the partitioning of management activities presented by Mintzberg [32]. However, the Mintzberg categories are not mutually exclusive and many specific work activities can be related to more than one role. Other researchers have noted this problem in empirical settings [43].

The work roles utilized in this study were those created by Hemphill [21]. He generated his set of managerial work roles by compiling a list of 575 work activities from interviewing managers and examining job description statements. This list of work activities was evaluated by 93 executives in five large manufacturing firms. Using a Likert scale, each manager rated the extent to which each statement applied to his or her job. The work roles were determined by correlating the response of

pairs of 93 subjects. Tucker's interbattery factor analysis method was applied to an off-diagonal submatrix of these inter-correlations, which generated a set of work activities representing each work role. Reliabilities for each set of work activities ranged from .74 to .89. Low inter-correlations among the work roles indicated their relative independence. This analysis produced a set of eight work roles which would be germane to studying the positions of the CEO. These roles and examples of related work activities are:

1. Providing a staff service in non-operational areas;
 - Selection of new employees
 - Assign jobs to subordinates
2. Supervision of work;
 - Trouble shoot special operational problems as they arise
 - Decide the best use of available facilities
3. Business Control;
 - Review of budgets for operations
 - Maintenance of proper inventories
4. Technical concerns with products and markets;
 - Assist sales people in securing important accounts
 - Anticipate new or changed demand for products
5. Human, community, and social affairs;
 - Active in community affairs
 - Promotion of company to public
6. Long-range planning;
 - Formulation of long-term objectives for organization
 - Determination of business activities to engage in
7. Business reputation; and
 - Oversees delivery schedule
 - Oversees the quality of company products

8. Preservation of assets.

- Oversees capital expenditures
- Determines utilization of capital assets

Although these work roles were formulated in 1960, they are supported by recent work on managerial behavior. In his study of managerial work behavior, Whitely ([69], p. 344) notes, “[s]tudies as widely spaced in time as Hemphill [21] and Tornow and Pinto [46] identify similar behavioral (work) dimensions.”

Brunswik Lens Model

The primary thrust of this research centers on the judgment of the CEOs as to their perception of the relative importance of the managerial work roles identified with their position. One method of accomplishing this would be to simply ask each CEO to rank each work role in terms of relative importance. However, Slovic, and Lichtenstein [41] established that most decision makers have poor insight when utilizing such subjective estimates of their own multiple-criteria decision process. To overcome this problem, Brunswik’s Lens Model was used to study the judgment process of CEOs who are owner-managers and CEOs who are nonowner-managers.

In this model, each subject is required to make a quantitative evaluation of a large number of situations, each of which is defined by certain cue dimensions. These cue variables must be quantifiable, even if only to the extent of a binary (0 vs. 1) relationship. Each CEO was presented with a set of profiles (“situations”), each describing a hypothetical CEO based on his/her ability to perform the eight work roles (“cue dimensions”). Utilizing this information, the subjects rated the predicted effectiveness of each of the hypothetical CEOs. By varying two different levels of ability for each work role on each hypothetical profile, it is possible to determine the relative degree of importance that the CEO places on each work role.

This model was selected for two reasons. First, it uses an ideographic-statistical approach to hypothesis testing, which allows for the utilization of a small sample size. Ideographic implies that *each* subject’s behavior (judgment) must meet a statistical test of significance ([19], [41]). This, in turn, demands that a sufficient number of situations be given to each subject to perform a sufficient number of tests. Thus, the Lens model provides a quantified, descriptive summary of the way each CEO weighs and combines information. Second, with its inferential qualities, this model allows the CEO to make judgments in an atmosphere that approximates his or her own decision-making environment. As Mitroff states:

The important point to appreciate about the Brunswik paradigm is that it specifically incorporates the idea of a probabilistic, uncertain decision-making environment. Unlike most psychological experiments where both the cues and the variables to be estimated are “visible,” in a Brunswik experiment a subject is forced to engage in inferential decision-making, i.e., to infer the value of a variable that is hidden from his “direct view.” ([34], p. 49)

Data Collection

The research design utilized is a 4-4 split of a fixed-effect 2⁵ factorial ANOVA. Each work role was described in terms of two ability levels: excellent or poor. The two levels used in this study were distributed in a 4:4 ratio. Thus, each hypothetical CEO profile has four excellent-ability work roles and four poor-ability work roles. In using such a split, the design is controlled for rater judgment bias which may occur should the profile be weighted unevenly with either more "excellent" or "poor" work role abilities.

In order to create an instrument of reasonable length, a one-half fractional replication was employed. This design produced a set of 35 hypothetical profiles for each subject. With instruction by the researcher, each subject made judgments as to the predicted effectiveness of each hypothetical CEO, based on a scale of one to nine. For data analysis purposes, these judgments were recoded 1, 2, and 3, representing extremely ineffective, average effectiveness, and extremely effective performance.

Subjects

The subjects of this research project consisted of eight CEOs of wood furniture manufacturing firms. Four CEOs are considered owner-managers, as they started their own firms, while four CEOs were promoted to their position and are considered nonowner-managers. A single industry was selected to hold constant as many extraneous variables as possible. All firms meet the Small Business Administration's definition of "small business" in terms of dollar sales and number of employees. Each CEO was interviewed and the data collection instrument was completed in the author's presence.

Results

In Table 1, the magnitude of effect of each work role and the mean effect for each subject group are presented. These calculations are based upon the degree to which the dependent variable (i.e., "predicted effectiveness") shifted as the levels of the work roles varied from poor to excellent. A positive magnitude of effect indicated the work role is unimportant. In other words, a negative magnitude of effect occurs if the predicted effectiveness variable is reduced when the level of ability goes from poor to excellent. Therefore, this index provides the "direction" and "degree" of importance associated with each work role.

These results indicate that three categories of work roles exist among these subjects: Universally important roles, universally unimportant roles, and those roles whose importance is moderated by ownership status.

Long-range planning and preservation of assets are considered the most important roles by each group of subjects. The mean effects are statistically identical for the owners and nonowners. Neither the magnitude of importance of these roles nor the consistency across subject groups is surprising.

Business control, human, community, and social affairs, and business reputation are three managerial roles which are considered relatively unimportant by both groups

Table 1
Direction and Degree of Work Role Importance
for Each CEO*

CEO Owner-Manager	Magnitude of Effect of Managerial Work Roles**							
	A	B	C	D	E	F	G	H
1	.188	-.058	-.062	-.076	-.326	.326	-.326	.350
2	-.188	-.247	-.188	-.012	-.198	.452	-.071	.483
3	.000	-.408	-.250	.227	-.317	.191	-.063	.666
4	-.375	-.188	-.125	.324	-.254	.382	-.127	.400
\bar{x}	-.094	-.225	-.156	.116	-.274	.338	-.147	.475
CEO								
Nonowner-Manager								
5	.125	.016	.375	-.307	-.667	.159	-.159	.466
6	.000	-.125	-.625	-.259	-.259	.635	.127	.533
7	.357	.612	-.500	.308	-.095	.223	-.476	.476
8	.000	-.408	-.250	-.021	-.227	.404	-.041	.485
\bar{x}	.125	.024	-.250	-.070	-.324	.355	-.137	.488
<i>p</i> value***	.021	.005	.322	.032	.569	.873	.912	.888

* Calculation based upon the degree to which the dependent variable (predicted effectiveness) shifted as the level of the work role varied from poor to excellent. A minus (-) sign indicates the work role is considered unimportant.

** A: Providing a staff service in a non-operational area
 B: Supervision of work
 C: Business control
 D: Technical concerns with products and markets
 E: Human, community, and social affairs
 F: Long-range planning
 G: Business reputation
 H: Preservation of assets

*** Scheffe's test for *post hoc* comparisons of each group of subjects.

of subjects. Both business control and business reputation roles involve operational activities associated with inventory control, quality control, and budgetary reviews. Even in these small firms, it is likely that these activities are delegated to lower-level managers. The subjects did not perceive the work role human, community, and social affairs to be important. This may be attributable to the geographic characteristics of the sampled firms. All of the companies were located in rural settings which was hundreds of miles from the closest metropolitan area. Hence, there was little public and consumer visibility, which may have reduced the importance of this role for CEOs in the survey.

Providing a staff service, supervision of work, and technical concerns with products and markets are the three roles which are perceived significantly different in

importance by the owner and nonowner groups. While clearly moderated by ownership status, the purpose here is to relate these role perceptions to the underlying psychological attributes of the owners and nonowners.

Discussion

Much of the research on the psychology of entrepreneurs is directed at the identification of traits that might compel an individual to commence a business venture. The entrepreneurs in this study each formed the companies they now own and manage. Their perceptions of the importance of particular work roles differ from nonowner-managers of similar firms in the same industry.

Supervision of Work

Owner-managers perceive this role to be unimportant in the managerial repertoire. Indeed, except for human, community, and social affairs, it was the least important of the eight roles examined. This result is consistent with an internal locus of control belief. Internals have been reported to be more trusting [20] and to be more satisfied with a participative management style [38]. Externals have been reported to favor a more directive and structured form of supervision ([25], [30]). Recent findings from Miller, Droge, and Toulouse [31] also offer an explanation regarding high achievement motivation. They found that centralization and formalization were positively affected by the level of achievement motivation in their sample of small firm CEOs. In highly structured firms, the need for close supervision is eliminated. That is, if decision making authority is centralized in the hands of a few top executives and the behavior of workers is controlled by rules and procedures, supervision may not enhance effectiveness.

Technical Concerns for Products and Markets

Since the owners were more probably motivated to enter the furniture business due to the technical expertise or market knowledge, their continued concern for this role is not surprising. However, a high need for achievement is also consistent with this result. Direct contact with customers is implied within this role and will likely provide the immediate performance feedback intrinsic to the need achievement construct. Also, being close to product concerns and markets would be instrumental in setting goals and supporting the sense of personal responsibility for their attainment, which is also manifest in the need achievement drive.

Providing a Staff Service in a Non-Operational Area

This role is perceived as the third most important among the nonowner-managers. There is evidence which suggests that managers who are promoted tend to place priorities on working behaviors closely related to their former positions ([5], [6], [36], [47]). This may well be the best explanation for this observed difference. However, need achievement among the owner-managers can also be evoked as an explanation.

Staff support of a non-operational area might bear, at best, a tenuous relation to goal achievement and provide the least feedback to the owner.

Conclusions

In conclusion, this research posits that differences in work role orientation among owners and nonowners may well be attributable to a personality set which motivates the initial entrepreneurial event. It is believed that this position offers opportunities for future research and also has implications for practicing managers in these types of organizations.

Managerial attention should be directed toward supplementing the owner's repertoire. If it is acknowledged that each of the managerial work roles are, to some extent, necessary as the firm grows and prospers, then strategies for filling some voids in work supervision and staff services must be developed. *Delegation* is an obvious solution, yet it is one which must be justified by growth of the firm. The creation of a Product Supervisor, Director of Operations, or a similar position is an approach to relieving the owner of supervisory responsibilities. *Management development training* in the development of policies and procedures or in job design may assist the owner in reducing the need for supervision within the organization. Restructuring work flows and installing performance pay systems can also reduce supervision requirements. *Use of outside resources*, either consultants or special services providers such as employee leasing firms, can supplement support service inadequacies. Finally, the *judicious selection of outside directors* can be used to complement the skills and interests of the owner.

Research might well extend the understanding of how these psychological attributes influence managerial work activities after the venture formation stage. The channeling of the owner's attention into particular roles is likely to influence structural designs, commitments to staff development, growth strategies, product development efforts, and a host of other organizational outcomes. The call for research by Jennings and Zeithaml [24] concerning the locus of control construct, and the recent work by Miller, *et al.* [31] on CEO need achievement are examples. These may be viewed as logical and potentially fruitful extensions of the rich history of psychological inquiry in entrepreneurial research.

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