How do Transformational Leaders Transform Organizations? A Study of the Relationship between Leadership and Entrepreneurship*

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ABSTRACT

The aim of this study is to discover the relationship between different leadership styles and alternative entrepreneurial strategies in the not-for-profit public school system. We develop a conceptual framework for understanding various strategies of corporate entrepreneurship. Accordingly, we hypothesize that transformational leadership can promote a “vigorous entrepreneurial strategy” that encourages radical change, whereas monitoring leadership can only promote limited change by means of an incremental “calculated entrepreneurial strategy.” Passive-avoidant leadership restricts organizational entrepreneurship to the boundaries of existing constraints, mainly using a “conservative strategy.” These relationships were tested using a sample of 1,395 teachers working under 140 elementary school principals. The results partially support the expected relationships. It was found that although transformational leadership provides the most accommodating managerial background for radical entrepreneurship, the relationship is complex. We discuss the implications of these findings for both theory and practice.

Organizations in general, and schools more specifically, are currently functioning in a highly competitive global environment, characterized by rapidly changing technologies. The increase in uncertainty, complexity, and

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competitiveness; scarceness of resources; and the need for continual change, in both non-profit and for-profit organizations, has made entrepreneurship a vital asset for organizational survival, growth, and productivity (Damanpour, 1991; Howell & Higgins, 1990). Corporate entrepreneurship has been recognized as an organization-level phenomenon (Zahra, Karutko, & Jennings, 1999). Consequently, it has been argued that entrepreneurship can be described as an organization’s constant tendency to initiate and implement incremental, as well as radical, innovations in its internal and external environment (Herbert & Brazeal, 1998; Kemelgor, 2002). It has therefore been suggested that entrepreneurship should be examined in terms of the internal and external organizational environments (Baron, 2002; Caruana, Ewing, & Ramaseshan, 2002). In this realm, the role of managers and leaders as change-oriented agents and as entrepreneurs has been stressed (e.g., Schein, 1996; Spreitzer, Janasz, & Quinn, 1999; Work, 1996).

Theories of transformational and charismatic leadership suggest that there is a significant relationship between leadership, organizational change, and entrepreneurship. Charismatic (transformational) leaders, according to Conger and Kanungo (1998), “are by nature entrepreneurial and change oriented” (p. 133). Transformational leadership has also been linked to the promotion of change and innovation in organizations (Bass, 1985; Howell & Avolio, 1993; Howell & Higgins, 1990), as is evident from the term “transformational leadership,” which has been broadly defined as resulting in the transformation of individual followers or of entire organizations (Yukl, 1998). Accordingly, charismatic leadership has been associated with innovation (Bass, 1985; Conger & Kanungo, 1987, 1988; House, 1977). Furthermore, empirical evidence suggests that proactive behavior, such as demonstrating initiative, taking action, and persisting until goals are achieved, is associated with transformational and charismatic leadership (Bateman & Crant, 1993; Crant, 2000; Deluga, 1998). Therefore, it could be argued that transformational leadership is associated with the two basic components of corporate entrepreneurship mentioned in the entrepreneurial research: the proactivity of top managers and organizational innovativeness.¹

¹Five main dimensions of corporate entrepreneurship have been mentioned in the theoretical literature: proactivity, innovation, risk-taking, autonomy, and competitive aggressiveness (Lumpkin & Dess, 1996). The first three are most common in measurements of corporate entrepreneurship. Of these dimensions, we considered proactivity and innovation to be intrinsic to corporate entrepreneurship. The theoretical justification for that is given in the next section.
Following Brown, Davidsson, and Wiklund (2001) and Eyal and Inbar (2003), who assert that distinct strategies of entrepreneurship should be represented by different combinations of entrepreneurship components, this study aims to investigate the relationship between leadership in the school system and the main components of entrepreneurship (managers’ proactivity and organizational innovation), by focusing on entrepreneurship as a strategy-profile-based phenomenon.

THEORY AND HYPOTHESES

Corporate Entrepreneurship

The literature on corporate entrepreneurship recognizes the importance of the individual to the entrepreneurship process. However, individuals act within a complex organizational framework that facilitates or limits their actions (e.g., Baron, 2002; Covin & Miles, 1999; Sharma & Chrisman, 1999). Thus, entrepreneurship is often regarded as an organizational phenomenon. Entrepreneurship was initially defined by Schumpeter (1934), who asserted that the primary function of entrepreneurship is innovation.

In contrast to the unidimensionality of the above definition, Miller (1983) argues that corporate entrepreneurship is a multidimensional phenomenon that includes a tendency towards innovation, proactivity, and risk-taking in the development of products and technology (see also Covin & Slevin, 1991; Miller & Friesen, 1982; Slevin & Covin, 1990). Innovation is defined as the ability to implement newly designed services and/or products. Proactivity is defined as the inclination to shape the environment, rather than merely react to it passively (Covin & Slevin, 1991; Slevin & Covin, 1990). It has also been defined as the willingness to initiate action to which competitors then respond (Covin & Slevin, 1991; Slevin & Covin, 1990). Risk-taking implies willingness to make large and bold commitments of resources or to venture into unknown spheres, both of which have a reasonable chance of costly failure (Baird & Thomas, 1985; Miller & Friesen, 1978).

Although a multidimensional conception of organizational entrepreneurship has been used in earlier research, measurements have usually been unidimensional. This may reflect researchers’ tendency to use a single average score for the three dimensions in describing corporate entrepreneurship (e.g., Brown, Davidsson, & Wiklund, 2001; Covin & Slevin, 1989). Moreover, inclusion of the risk-taking dimension in the entrepreneurship scale may lead
to measurement bias, since researchers have not found systematic correlations between risk-taking and entrepreneurial organizations, suggesting that this variable does not function linearly in the prediction of organizational entrepreneurship (Lumpkin & Dess, 1996; Norton & Moore, 2002).

Therefore, we propose that different combinations of the two main dimensions of corporate entrepreneurship – the managers’ proactivity and organizational innovativeness – should represent the entrepreneurial phenomenon. However, entrepreneurship may take different shapes and characteristics, since these two dimensions may be found in various combinations in different organizational settings. These combinations have been given different theoretical conceptualizations in the literature, signifying different entrepreneurial orientations within the system. Table 1 summarizes the different theoretical entrepreneurial orientations suggested by the literature.

The conservative orientation, represented by Covin and Slevin’s “conservative organization” (low proactivity and low innovativeness) (1989) or Mintzberg’s “adaptive mode” strategy (moderate proactivity and low innovativeness) (1973), emphasizes stability, continuity, and maintenance of the status quo (Barringer & Bluedorn, 1999; Brazeal & Herbert, 1999).

The incremental orientation, represented by Mintzberg’s “calculated entrepreneurial strategy” (moderate proactivity and moderate innovativeness) (1973), is reactive in nature and displays traditional linear models that build on

Table 1. The Theoretical Entrepreneurial Strategies.

<table>
<thead>
<tr>
<th>Organizational innovativeness</th>
<th>Managers’ proactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>Conservative organizations</td>
</tr>
<tr>
<td>Moderate</td>
<td>Non-entrepreneurial strategy*</td>
</tr>
<tr>
<td>High</td>
<td>Non-entrepreneurial strategy*</td>
</tr>
</tbody>
</table>

*These strategies are viewed in the literature as non-entrepreneurial. Their orientation favors the implementation of extrinsic initiatives over intrinsic initiatives. In these strategies, little effort will be made to generate new ideas. Although such strategies may exist, scholars will not ascribe them in theory to organizational entrepreneurship, because they do not demonstrate a proactive, self-directing, managerial stance (Lumpkin & Dess, 1996; Miller, 1983).
historical improvements approved by the system. However, this orientation
does not change the status quo dramatically (Bygrave, 1989; Bygrave &

The opportunistic orientation, represented by Adizes’s “arsonist entrepre-
neurship” (high proactivity and low innovativeness) (1985) and Eyal and
Inbar’s “initiating entrepreneurship” (high proactivity and moderate innova-
tiveness) (2003), represents a “flurry” strategy. These strategies resemble
Stevenson and Jarillo’s opportunistic entrepreneurial orientation (1990), in
which almost any opportunity is perceived as one that should be taken
advantage of by the firm (Brown et al., 2001). Organizations that follow the
opportunistic orientation create a work environment full of ideas. However,
while the “arsonist entrepreneurship” strategy does not lead to the
implementation of the ideas that come up, the “initiating entrepreneurship”
strategy can be classified as a proactive mode that promotes a trial-and-error
culture, although with limited institutionalization of irregular practices.

The radical orientation is represented by the “vigorous entrepreneurial
strategy” (high proactivity and high innovativeness) (see Barringer & Bluedorn,
1999; Covin & Slevin, 1989; Kemelgor, 2002; Miller & Friesen, 1978). This
strategy features discontinuous, frame-breaking changes and discards conven-
tional operating practices (Brazeal & Herbert, 1999; Stringer, 2000). It
represents a dramatic departure from current organizational strategy, indepen-
dent of the authorities in the system (Tellis & Golder, 1996). Therefore, it
could be claimed that this entrepreneurial strategy represents the ability to go
against the current organizational structure, operating as if it did not exist.
Hence, it is a way of making organizational dreams come true while ignoring
the standard ways of thinking or acting (Czariawska-Joerges & Wolff, 1991).

**Leadership and Entrepreneurship**

Leadership and entrepreneurship are discussed together in the research
literature (Drucker, 1985; Pinchot, 1985). Czariawska-Joerges and Wolff
(1991) differentiate between the two and claim that while leadership is
responsible for clarifying causality, simplifying reality and strengthening
control over it, entrepreneurship is an action that can be related to generating
new realities. Although leadership and entrepreneurship overlap to some
degree, leadership involves influencing subjects’ symbolic realm in order to
move them towards certain actions and determining the time and scope of
these actions (Leavy, 1996; Shamir, House, & Arthur, 1993), whereas
entrepreneurship represents the operational translation of symbols and
behaviors into actions. It is not just a matter of looking for opportunities; it is even more about generating a new organizational agenda and creating new things, while translating symbols into tangible organizational initiatives, action plans and performance.

There is a large body of research literature focusing on a wide variety of leadership styles (for comprehensive reviews see Bryman, 1996; Yukl, 1998). In this study we will generally draw on current theories of leadership labeled by Bryman (1996) as the “new leadership” theories (including charismatic leadership, visionary leadership and transformational leadership), and more specifically we will focus on transformational leadership theory. Theory and research on transformational leadership distinguishes between three leadership styles: (1) transformational, (2) transactional or monitoring, and (3) laissez-faire or passive-avoidant (Avolio, Bass, & Jung, 1999; Bass & Avolio, 1994).

Numerous claims have been raised in the theoretical literature regarding the relation between transformational leadership, entrepreneurship and the innovation process (e.g., Bass, 1985; Bass & Avolio, 1994; Howell & Avolio, 1993; Howell & Higgins, 1990; Oberg, 1972; Spreitzer et al., 1999). Moreover, House and Aditya (1997) assert that charismatic (transformational) leadership theories are unique in that they explain how leaders establish successful entrepreneurial corporations.

Following Oberg (1972), the above-mentioned writers contend that transformational leadership brings about radical change by supporting beliefs and values that differ from the existing ones. By exerting their influence on followers, transformational leaders shape followers’ identification, value internalization, emotional bonding, and social contagion processes (Shamir, House, & Arthur, 1993). As a result, subordinates are willing to sacrifice their own personal interests for the sake of a collective goal and to perform beyond expectations (Bass, 1985). Thus, by kindling followers’ identification, motivation, and inclination to contribute to the development of the organization, transformational leaders may promote radical entrepreneurship in the corporation.

In line with the above conception of charismatic and transformational leadership, Howell and Higgins (1990) describe organizational champions as entrepreneurs who use informal organizational mechanisms to garner support for innovations (see also Maidique, 1980; Pinchot, 1985). While doing so, they relate the concept of transformational leadership to the literature on organizational champions, suggesting that organizational champions (i.e., entrepreneurs) support and advance innovations at the price of confronting
obstacles presented by organizational officials (Shane, 1994). They conclude that organizational champions function as transformational leaders, developing a clear organizational vision and mechanisms that may be used in order to discover opportunities. These dynamics are in line with organizational radical entrepreneurial activism, since entrepreneurship requires persuading and motivating others to sustain their effort, generating a vision and turning it into reality (Baron, 2002; Baron & Markman, 2000; Vecchio, 2003). Therefore, transformational leadership as one of the main processes in influencing others and increasing their devotion, loyalty, excitement, and enthusiasm is considered to set the basic conditions for radical entrepreneurial strategies.

Based on the assumption presented in the theoretical literature, the following assumptions are made:

**Hypothesis 1a**: Transformational leadership is positively related to proactivity and innovativeness.

**Hypothesis 1b**: Leaders who rate high on the transformational scale are more likely than others to exhibit radical entrepreneurial strategies, characterized by higher levels of proactivity and innovativeness (i.e., “vigorous entrepreneurship”).

Transactional leadership is a second major style identified in the literature. It involves an exchange process between the leader and the followers, intended to increase followers’ compliance to the leader and the organizational rules (Yukl, 1998). Leaders who maintain tight logistical control by emphasizing compliance with rules and procedures, by checking on the progress and quality of the work, and by evaluating the performance of individuals and the organizational unit would rate high for monitoring behavior (Quinn, 1988; Spreitzer et al., 1999).

Monitoring behavior is often linked to the concept of management. In the controversy in the literature over how to distinguish managers or management processes from leaders or leadership processes, it is suggested that management is stability-oriented whereas leadership is innovation-oriented (Bennis & Nanus, 1985; Yukl, 1998; Zaleznik, 1977). Hence, monitoring implies behaviors aimed at controlling others in order to preserve stability in the workplace (Bass, 1985; Kotter, 1990) or, at best, advocacy of incremental changes to organizational systems in an effort to make the existing processes more efficient.

With these assumptions in mind, it may be argued that monitoring leadership will be related to moderate levels of proactivity and innovativeness,
which can be characterized as first-order, incremental, non-deviant entrepreneurial strategies. Hence, the following assumptions are made:

**Hypothesis 2a**: Monitoring leadership will be positively related to proactivity and innovativeness, but less strongly than is transformational leadership.

**Hypothesis 2b**: Leaders who rate high for monitoring leadership are more likely to exhibit incremental entrepreneurial strategies characterized by moderate levels of innovativeness and proactivity (i.e., “calculated entrepreneurship”).

Passive-avoidant leadership, the third leadership style identified in the literature, is characterized by two main features: laissez-faire leadership, i.e., behavior that exhibits passive indifference to tasks and to subordinates; and management by exception (passive), which employs contingent punishments and other corrective actions when faced with deviations from performance standards (Avolio et al., 1999; Bass & Avolio, 1994).

Since passive-avoidant leadership represents the antithesis of change-oriented behavior, we suggest that supervisors who apply this form of leadership are likely to behave in ways that will not inspire ideas, innovation, creativity or willingness to promote change, and instead encourage a conservative, anti-entrepreneurial organizational strategy. Hence, the following assumptions are made:

**Hypothesis 3a**: Passive-avoidant leadership is negatively related to proactivity and innovativeness.

**Hypothesis 3b**: Leaders who rate high for passive-avoidant leadership are likely to exhibit conservative strategies characterized by low levels of proactivity and innovativeness (i.e., “conservative organization”).

Above we have presented the hypothesized relationship between entrepreneurship and transformational leadership. At this stage we would like to tie our hypotheses to the context of schooling and educational systems, and to recent trends and perspectives in the education literature, in order to demonstrate the important role entrepreneurship and leadership can play within the context of schools.

**Schooling, Entrepreneurship and Principal’s Leadership**

Government striving to control schooling and school reliance on public funds, as a structural arrangement, has made schools slow-changing organizations. In this framework, schools are considered to be conservative organizations
that retain their basic characteristics across time, place, and even cultures (Drucker, 1985; Weick, 1976). Their patterns have been suggested to be well-established and legitimize, and are known to represent the most efficient way of organizing education (Cuban, 1984).

However, increases in diversity among pupils, as well as other rapid technological, legal and societal changes in the school environment, have exposed schools to greater uncertainties (Hargreaves, 1997a, 1997b). This uncertainty has been reinforced by the introduction of market mechanisms in education due to the withdrawal of the welfare state from educational responsibilities (Ardichvili, Cardozo, & Ray, 2003; Caruana et al., 2002). Therefore, the need to retain the relevance of schools to the public they serve has become crucial (Bowe, Ball, & Gold, 1992; Boyett & Finlay, 1993; Kerchner, 1988). Not being able to act in adaptive and innovative ways may endanger school legitimacy. Drucker (1985) asserts that not being entrepreneurial, schools might lose their relevance, allowing alternative entrepreneurial agencies to take over their fundamental functions, leaving them drained of substance (Drucker, 1985). This in turn can lead to the limitation of children’s equal access to education and endanger the role of schooling as a mechanism for reducing social-economic gaps.

The rise of uncertainty in the educational arena has been discussed in the literature, leading to the call for decentralization processes that give schools, and mainly their principals, the authority to respond in a non-bureaucratic, rapid mode to their community’s needs (Bowe et al., 1992; Boyett & Finlay, 1993). Following this call, decentralized reforms have been mandated to insure that school principals will adjust their school practices to their community’s needs and to their uncertain environments. However, studies have reported that even with decentralization reform in England (Boyett, 1997; Boyett & Finlay, 1993) and in Israel (Eyal & Inbar, 2003), school entrepreneurship is still restricted by the government. Thus, it could be argued that although the decentralization process may put pressure on schools to act in an entrepreneurial fashion, in order to satisfy local demands (Bowe et al., 1992; Boyett & Finlay, 1993; Kerchner, 1988), schools must still abide by the system’s standards in order to maintain their legitimacy and accordingly avoid unapproved entrepreneurial strategies. Nevertheless, these reforms have created a new role for principals as transformational leaders who take proactive stances in shaping their environmental conditions.
Transformational leadership models have substituted the instructional leadership model dominating the educational field in the 1980s (Hallinger, 2003; Leithwood, 1992). Instructional leadership was concentrated on classroom management. Principals directed curriculum planning and teaching by instructing and guiding their teachers (Leithwood, 1994; Sheppard, 1996). This leadership matched the “effective school movement” goals that had asked to insure pupils’ proficiency in basic skills, through detailed mapping of class curriculum, teaching process, and time devoted for learning (Hallinger, 2003). This leadership model asked principals to monitor closely teachers’ activities in order to assure the relationship between teaching and its products (Leithwood, 1994). Therefore, instructional leadership resembles Bass’s transactional leadership, which concentrates on the efficient attainment of the organizational goals (Bass, 1985; Sergiovanni, 1984). This leadership model is suitable when the system’s reform goals are well defined and agreed upon or when the practices in use are well defined. In these cases, leadership styles such as monitoring, instructing or directing, which are related to managing the organizational routine, are seldom connected with second-order change of the organizational assumptions (Leithwood, 1992). Therefore, instructional (monitoring) leadership cannot promote a radical entrepreneurship that facilitates the creation of new organizational realities. In comparison, transformational leadership can foster radical entrepreneurship.

During the restructuring movement starting in the 1990s, school-based management reform and teachers’ empowerment ideas have become popular. This perspective has contributed to a more complicated and uncertain reality for schools (Leithwood, 1994). Under these circumstances, transformational leadership that is able to facilitate first- and second-order changes in schools (Hallinger, 2003; Leithwood & Louis, 1999) is likely to be related to a radical entrepreneurship strategy. The radical strategy, described above, represents a dramatic departure from the system’s familiar practices (Tellis & Golder, 1996). Thus, we suggest that transformational leadership can adopt a radical entrepreneurial strategy as its main tool for realizing alternative educational realities that recognize and take advantage of new opportunities in the school environment and act upon them, while providing better schooling for diverse pupil’s needs. Based on the significant link drawn between schooling, entrepreneurship and a principal’s leadership style, we aim to test the above hypotheses regarding the relationship between entrepreneurship and a principal’s leadership in the context of the public-governmental school system.
METHOD

Sample and Data Collection
This study is based on a stratified random sample of 140 Israeli elementary schools located in three districts. The response rate of schools was 81 percent. In each school, ten teachers were chosen randomly to participate in the study. In all the schools sampled, ten teachers responded, except for two schools where only seven and eight teachers responded. The response rate of teachers across schools was 99.6%. A total of 1,395 teachers – 68 percent of them female – were included in the sample.

The use of a stratified sample usually requires a weighted sample to prevent deviations in the estimates and in the p-values derived from the statistical tests (Levy & Lemeshow, 1991; Thompson & Seber, 1996). In our case, however, no correlation was found between the sample weights and the regression residuals. Hence, this is a non-informative sampling and therefore does not require the use of sampling weights for performance of the statistical procedures (Pfeffermann & Sverchkov, 1999).

Measurements

Measurement of School Entrepreneurship
Items from the Public School Entrepreneurial Inventory (PSEI [Eyal & Inbar, 2003]) were used to measure the two dimensions of entrepreneurship – proactivity and innovativeness. The items were formatted on a seven-point Likert scale, and subjects were asked to indicate the degree to which each item described the situation in their school. Four items measured proactivity ($\alpha = 0.86$) and ten measured innovativeness ($\alpha = 0.92$). Construct validity was tested by exploratory principal component factor analysis (Grimm & Yarnold, 1997), with direct oblimin rotation. The results of this analysis appear in Table 2.

In line with the theoretical model of entrepreneurship proposed above, two dimensions of entrepreneurship as organizational phenomena emerged in the factor analysis:

1. Principal proactivity. This factor refers to the principal’s willingness to initiate actions within the school, i.e., intrinsically motivated actions not imposed by higher authorities. Proactivity emphasizes activism but does not always suggest an ensuing change, innovation or reform. Rather, it involves introducing opportunities into the organization.
2. Organizational innovativeness. This component is defined as the perceived quantity of innovations implemented in an organization or unit (i.e., school) in a given time period and their impact (first- or second-degree change) on the organization.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>The innovations implemented in the last two years have radically changed the school.</td>
<td>0.869</td>
<td>−0.124</td>
</tr>
<tr>
<td>The innovations implemented in the last two years have led to an overall, system-wide change in our school.</td>
<td>0.841</td>
<td>0.010</td>
</tr>
<tr>
<td>The innovations implemented in the last two years have caused a turnaround in our school’s courses of action.</td>
<td>0.831</td>
<td>0.018</td>
</tr>
<tr>
<td>The innovations implemented in the last two years have led to a significant and substantial change in the guiding assumptions of our school.</td>
<td>0.816</td>
<td>−0.192</td>
</tr>
<tr>
<td>In the last two years a great many innovations have been implemented in our school.</td>
<td>0.696</td>
<td>0.218</td>
</tr>
<tr>
<td>In the last two years our school has implemented a great number of activities that did not exist previously.</td>
<td>0.691</td>
<td>0.167</td>
</tr>
<tr>
<td>In the last two years our school implemented many activities that had not been tried previously.</td>
<td>0.660</td>
<td>0.170</td>
</tr>
<tr>
<td>A great number of innovations were implemented in our school in the last two years.</td>
<td>0.572</td>
<td>0.232</td>
</tr>
<tr>
<td>Innovations are a central factor in the life of our school.</td>
<td>0.556</td>
<td>0.306</td>
</tr>
<tr>
<td>In our school there is a tendency to implement new courses of action.</td>
<td>0.504</td>
<td>0.381</td>
</tr>
<tr>
<td>Our school principal shows a lot of initiative.</td>
<td>0.097</td>
<td>0.846</td>
</tr>
<tr>
<td>The school principal shows no initiative in his actions.</td>
<td>−0.108</td>
<td>0.835</td>
</tr>
<tr>
<td>The school principal has shown great initiative in the development of ideas and activities in our school.</td>
<td>0.147</td>
<td>0.774</td>
</tr>
<tr>
<td>Many of the activities that characterize our school are the direct result of the principal’s initiative.</td>
<td>0.050</td>
<td>0.723</td>
</tr>
</tbody>
</table>

Note. Factor 1: Innovativeness. Factor 2: Principal proactivity. Factor loadings greater than 0.4 are underlined.
Constructing the Entrepreneurial Strategy Profiles

In order to derive the entrepreneurial strategies from the entrepreneurial dimensions – the principal’s proactivity and the innovativeness of the organization – the average score assigned by the teachers for each of the factors was reduced to one of three categories: low, moderate, or high. For each dimension, a score of less than 4 was categorized as low, between 4 and 5.5 was considered moderate, and above 5.5 was considered high. The choice of these cutoff points is justified semantically. The entrepreneurial strategies were composed using the categorizations specified above for the two dimensions of organizational entrepreneurship: proactivity and innovativeness.

Theoretically, there are nine potential entrepreneurial strategies. However, as will be shown, only four strategies were identified in our study.

Measurement of Leadership Style

Items from the short version of Bass and Avolio’s Multifactor Leadership Questionnaire 5X (MLQ [Avolio et al., 1999]) were used to measure the different leadership styles on a five-point Likert scale.

To measure transformational leadership we used 16 items pertaining to the following behavioral components: individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence ($\alpha = 0.89$). Items measuring attributed charisma, which have been criticized for representing leadership impact rather than leadership behavior (e.g., Kark, Shamir, & Chen, 2003; Yukl, 1998), were not included.

In this study we focus on the monitoring aspects of transactional leadership evident in the component of “management by exception (active).”

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2 A semantic scale representing teachers’ agreement with the notion that the behaviors presented characterize the pattern that exists in their school accompanied the original seven-point Likert scale used in this research. Scores lower then 4 semantically represented disagreement with the notion that the behaviors (proactivity and innovation) characterized the pattern that existed in their school. All scores above 4 represent agreement that the behaviors presented characterize the school. Yet, proactivity and innovation are highly valued in society in general. Dividing the positive range of the scale reduced that bias. Thus, scores higher than 4 were divided in mid-range into two categories. Scores higher than 4 and lower than 5.5 meant that the behavior is to be found, but it cannot characterize fully the pattern of operation in the school. Scores higher then 5.5 represent strong agreement that the behaviors presented characterize the most common pattern in their school. It meant that the described behavior is happening on a regular basis at school.
Accordingly, monitoring leadership was measured by means of four items pertaining to management by exception (active) ($\alpha = 0.70$).

Passive-avoidance was measured using eight items pertaining to the MLQ behavioral components of laissez-faire and management by exception (passive) ($\alpha = 0.82$).

Each principal’s rating on the different leadership styles (transformational, monitoring, and passive-avoidant) was calculated based on the average ratings received from the teachers in their schools. Each principal’s mark for each leadership behavior was put in one of three categories, using the 25th and 75th percentiles as cutoff points. This procedure resulted in three main groups: those with low, medium, and high marks for the different leadership behaviors discussed above.

RESULTS

Aggregation Analyses

Before testing the hypotheses, we first had to justify the aggregation of individual perceptions (i.e., the teachers’ perceptions) of the research variables (i.e., dimensions of leadership style and entrepreneurship) to the group level of analysis. Average $r_{wg(i)}$ across groups ranged from 0.73 to 0.86 (see Table 3), suggesting sufficient within-group agreement. In addition, ICC(1) ranged from 0.13 to 0.37 and ICC(2) was between 0.60 and 0.86, providing sufficient evidence of between-group reliability. Finally, an ANOVA indicated that individual perceptions of all variables clustered significantly by group ($p < .001$). These results provided sufficient statistical justification for aggregating individual perceptions of leadership and entrepreneurship to the group level (see Bliese, 2000).

Table 3. Results of Aggregation Analyses.

<table>
<thead>
<tr>
<th>Variables</th>
<th>$r_{wg(i)}$</th>
<th>ICC(1)</th>
<th>ICC(2)</th>
<th>$F^*$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>0.83</td>
<td>0.27</td>
<td>0.79</td>
<td>4.71</td>
</tr>
<tr>
<td>Monitoring leadership</td>
<td>0.73</td>
<td>0.13</td>
<td>0.60</td>
<td>2.43</td>
</tr>
<tr>
<td>Passive-Avoident leadership</td>
<td>0.84</td>
<td>0.29</td>
<td>0.80</td>
<td>5.06</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.83</td>
<td>0.37</td>
<td>0.86</td>
<td>6.96</td>
</tr>
<tr>
<td>Principal proactivity</td>
<td>0.86</td>
<td>0.37</td>
<td>0.85</td>
<td>6.81</td>
</tr>
</tbody>
</table>

Note. df = 139, 1254.

*F for all variables was significant ($p < .001$).
Hypotheses Testing

Table 4 presents the descriptive statistics and zero-order correlations for the variables in the study. Hypotheses 1a, 2a and 3a were tested using multiple regression analysis, in which the leadership behaviors (transformational, monitoring, and passive-avoidant) and the principal’s background variables (length of time as a teacher in general and at the specific school in particular, length of time as a principal, and level of education) were entered as predictors, and the two entrepreneurship components were entered as

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transformational leadership</td>
<td>3.92</td>
<td>0.40</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Monitoring leadership</td>
<td>2.88</td>
<td>0.36</td>
<td>.08</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Passive-avoidant leadership</td>
<td>2.02</td>
<td>0.41</td>
<td>-.63*</td>
<td>-.14</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Principal proactivity</td>
<td>5.60</td>
<td>0.68</td>
<td>.72*</td>
<td>.13</td>
<td>-.67*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>5. Organizational innovativeness</td>
<td>4.78</td>
<td>0.64</td>
<td>.56*</td>
<td>.10</td>
<td>-.46*</td>
<td>.78*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. N = 140.
*p < .01.

Table 5. Relationships between Leadership Styles and Principal Proactivity and between Leadership Styles and Organizational Innovativeness: Regression Analyses.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized coefficients B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Principal proactivity</td>
</tr>
<tr>
<td>Transformational leadership</td>
<td>.50**</td>
</tr>
<tr>
<td>Monitoring leadership</td>
<td>.04</td>
</tr>
<tr>
<td>Passive-avoidant leadership</td>
<td>-.34**</td>
</tr>
<tr>
<td>Period of service as a teacher</td>
<td>.04</td>
</tr>
<tr>
<td>Period of service as a teacher at the school</td>
<td>-.04</td>
</tr>
<tr>
<td>Period of service as a principal at the school</td>
<td>.01</td>
</tr>
<tr>
<td>Education</td>
<td>.001</td>
</tr>
<tr>
<td>F-value</td>
<td>28.60**</td>
</tr>
<tr>
<td>R</td>
<td>.78</td>
</tr>
<tr>
<td>R²</td>
<td>.60</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.58</td>
</tr>
</tbody>
</table>

Note. N = 140.
*p < .05.
**p < .001.
dependent variables. Table 5 presents the results of these analyses. In support of Hypothesis 1a, transformational leadership was found to have a significant positive correlation with principal proactivity ($\beta = 0.50; p \leq .001$) and organizational innovativeness ($\beta = 0.43; p \leq .001$). In support of Hypothesis 3a, passive-avoidant leadership was found to have a significant negative correlation with principal proactivity ($\beta = -0.34; p \leq .001$) and organizational innovativeness ($\beta = -0.18; p \leq .05$). The correlations between these leadership styles (transformational and passive-avoidant) and principal proactivity were stronger than the correlations with organizational innovativeness. Hypothesis 2a was not supported. No significant relationship was found between monitoring leadership and the entrepreneurship components. Moreover, no significant relationship was found between the principal’s background variables and the entrepreneurship components.

**Organizational Entrepreneurial Strategies**

In this study, four of the proposed theoretical strategies of corporate entrepreneurship in elementary schools were identified: (1) the **conservative strategy**, consisting of a moderate score for principal proactivity and a low score for organizational innovativeness; (2) the **calculated entrepreneurial strategy**, consisting of moderate scores for principal proactivity and organizational innovativeness; (3) the **“initiating entrepreneurial strategy,”** consisting of a high score for principal proactivity and a moderate score for organizational innovativeness; (4) the **vigorous entrepreneurial strategy**, consisting of high scores for both principal proactivity and organizational innovativeness.

Table 6. Distribution of Entrepreneurial Strategies by School Principal’s Transformational Leadership Score ($N = 140$).

<table>
<thead>
<tr>
<th>Principals’ transformational leadership score categories</th>
<th>Frequency</th>
<th>Vigorous entr.</th>
<th>Initiating entr.</th>
<th>Calculated entr.</th>
<th>Conservative entr.</th>
<th>Total for the category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low No. of schools</td>
<td>0</td>
<td>6</td>
<td>25</td>
<td>5</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Low pct. of schools</td>
<td>0</td>
<td><strong>16.7</strong></td>
<td><strong>69.4</strong></td>
<td><strong>13.9</strong></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Medium No. of schools</td>
<td>8</td>
<td>32</td>
<td>27</td>
<td>4</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Medium pct. of schools</td>
<td><strong>11.3</strong></td>
<td><strong>45.1</strong></td>
<td><strong>38</strong></td>
<td><strong>5.6</strong></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>High No. of schools</td>
<td>8</td>
<td>23</td>
<td>2</td>
<td>0</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>High pct. of schools</td>
<td><strong>24.2</strong></td>
<td><strong>69.7</strong></td>
<td><strong>6.1</strong></td>
<td><strong>0</strong></td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Hypotheses 1b, 2b and 3b were tested using chi-square tests. Tables 6 and 7 show the entrepreneurial strategy distribution for schools by leadership style (transformational or passive-avoidant).

In support of Hypothesis 1b, a chi-square test examining the relationship between leaders’ transformational style and the entrepreneurial distribution was found to be statistically significant ($\chi^2[6, 140] = 43.29, p < .001$). We found a high proportion of “initiating entrepreneurship” among principals who scored high for transformational leadership behavior (see Table 6). This indicates that principals who are perceived as transformational leaders take more liberties to initiate new projects that were previously not pursued in the school. Moreover, a relatively high proportion of “vigorous entrepreneurship” is found among principals scoring high on transformational leadership. This shows that transformational leadership is also associated with an inclination to implement innovations that might lead to second-degree changes in the school.

Hypothesis 2b was not supported. A chi-square test of the hypothesis about the relationship between monitoring leadership and entrepreneurship was not found to be statistically significant. This finding shows that the distribution of organizational entrepreneurship strategies is not associated with monitoring leadership, which represents routine management behaviors.

A chi-square test examining the relationship between school leaders’ passive-avoidance score and the entrepreneurial distribution was found to be statistically significant ($\chi^2[6, 140] = 37.55, p < .001$), thus partially supporting Hypothesis 3b. According to the distribution shown in Table 7, a
relatively high rate of “calculated entrepreneurship” was found in schools whose principals scored high for passive-avoidant leadership behaviors. Passive-avoidant principals were also found to use the “conservative” strategy, although less than they used the “calculated entrepreneurship” and “initiating entrepreneurship” strategies. These results imply that principals who are perceived as passive-avoidant by their teachers are associated with a more limited ability to initiate and implement organizational changes in the school, but are also characterized – surprisingly – by moderate levels of proactivity and innovativeness.

DISCUSSION

In this paper we study the relationship between leadership and entrepreneurship, a relationship that has seldom been studied empirically. We can conclude from this study that leadership is associated with entrepreneurship. However, this relationship is complex.

Consistent with our hypotheses, the results show that transformational leadership sets the most favorable managerial circumstances for organizational entrepreneurial activism. It was found, however, that transformational leadership is more closely associated with proactivity than with organizational innovativeness. Studying the relationship between transformational leadership and the different entrepreneurial strategies provides further support for these results. Although transformational leadership was found to provide the most accommodating managerial background for radical entrepreneurship, the most prevalent strategy among transformational leaders was the “initiating entrepreneurial strategy” (high proactivity and moderate innovativeness). This demonstrates that although transformational leaders scored high on proactivity (generation of ideas), they received only moderate marks on innovativeness (e.g., school implementation of the ideas). As a result, entrepreneurial activism associated with transformational leadership is mostly opportunistic in nature. Our findings therefore suggest that transformational leaders in the context of elementary schools mostly promote a trial-and-error entrepreneurial culture that does not allow for the full materialization of radical, second-order changes. These results can be understood in light of the different organizational mechanisms associated with school entrepreneurship. First, while organizational innovativeness is a situational phenomenon dependent on overall organizational consensus to overcome internal resistance that might hinder
the implementation of the innovations, the principal’s proactivity is an intrinsic phenomenon, dependent mostly on the principal and his or her ability to generate ideas. Second, whereas principal proactivity does not require any special allocation of resources, organizational innovativeness, which is aimed at changing the organizational order, cannot be actualized without resources. Third, the finding that the radical entrepreneurial strategy is not the most common, even under transformational leadership, demonstrates that when one acts as an agent of change, adopting a nonconformist stance, legitimacy still plays a major role in public education systems. Thus, radical entrepreneurial strategies are used as limited experiments that foster system renewal, while simultaneously allowing for maintenance of the legitimate canonical practices.

Our findings on the relationship between passive-avoidant leadership and entrepreneurship mirror the results for the relationship between transformational leadership and entrepreneurship discussed above. The relationship between each entrepreneurial component (proactivity and innovativeness) and the leadership styles shows that although the passive-avoidant leadership style is negatively related to both principal proactivity and organizational innovativeness, its negative relationship with principal proactivity is greater. However, the distribution of passive-avoidant leaders among the different entrepreneurial strategies is somewhat surprising. Although the “conservative strategy” is common among leaders rated as highly passive-avoidant, most passive-avoidant leaders employ the incremental “calculated” entrepreneurial strategy. It can thus be claimed that passive-avoidant leadership is associated with a dynamic-conservative entrepreneurial orientation.

The dominance of the “calculated entrepreneurial strategy” among highly passive-avoidant leaders can be explained by the school principal’s job, as well as by the way the public education system works. First, the principal’s job requires at least a minimal level of proactivity. Second, principals are required to adapt to Education Ministry initiatives concerning new policies, innovations and reforms. Therefore, they are bound to implement changes to some degree. The teachers may identify this as a responsive strategy and associate it with the principal’s behavior. This strategy helps schools avoid clashes with officials of the public education system by using a continually adaptive mechanism, thereby fulfilling the passive-avoidant philosophy of keeping up with the system’s performance standards. Moreover, this type of entrepreneurial orientation may be used to overcome internal and external
pressures to change the status quo, thus accepting minor modifications of existing practices while maintaining and possibly reinforcing the core organizational mode of operation.

Unlike the effect of the transformational and passive-avoidant leadership styles on organizational entrepreneurial activism, no relationship was found between monitoring leadership and entrepreneurship. This may be due to the focus of transactional leadership on routine management; i.e., the principal will accept entrepreneurial activism within the school but will not support or advance it in any systematic manner. Our results may shed some light on the ongoing controversy in the literature about the difference between leadership and management. The findings of the present study suggest that supervisors who use a monitoring leadership style, which can be associated with a managerial stance, are less inclined to be proactive in any systematic manner or to lead to organizational innovativeness. In contrast, transformational leadership uses entrepreneurship as a possible mechanism leading to change.

Therefore, our results may support the notion that leadership and management should be viewed as distinct processes. Moreover, transformational leaders may use radical entrepreneurship as a strategy that aims not only to address present and local needs, but also to elicit new public needs and to act upon them, regardless of system constraints. In this sense, radical entrepreneurship broadens the organization’s scope by exposing it to opportunities for renewal. Transformational leaders can make the most of this, since they act as agents of change.

The results of this study are limited by its cross-sectional design and the use of a single method of data collection. Although studies have shown that common-method bias is rarely strong enough to invalidate research findings (e.g., Doty & Glick, 1998), replication and extensions of our findings using experimental and longitudinal designs are needed.

Furthermore, the specific not-for-profit public elementary school system that formed the context in which the research took place might limit the generalization of the research conclusions. For instance, pupils’ age, the importance of subject matter, bureaucratic control, administrative autonomy, and different market mechanisms in high schools as well as in private schools might impose different constraints on school entrepreneurship. Therefore, further research is needed on the relationship between entrepreneurship and the environmental and organizational circumstances under which schools operate.
Despite its limitations, the study makes several tentative contributions to the literature on leadership and organizational entrepreneurship. In general, the results of the study provide, perhaps for the first time, fairly strong empirical support for the hypothesized relationships between transformational leadership and radical forms of entrepreneurship. Furthermore, by combining the different components of entrepreneurship, we offer a taxonomy of entrepreneurial strategies. Identifying and naming these strategies is important, since each strategy is likely to have a different effect on organizational structure, organizational change and other organizational parameters (e.g., financial outcomes, employees’ creativity, and penetration of new markets).

Our results start to bridge the gap between the literature on transformational leadership and the entrepreneurship literature and shed some light on the processes by which transformational leaders achieve superior results as agents of change capable of transforming schools. Nevertheless, future research should further examine the impact of leadership style on components of entrepreneurship against the backdrop of other contextual factors that might affect these variables, such as environmental hostility, competitiveness, and uncertainty. This would make it possible to compare various sectors and might assist in identifying distinct entrepreneurial strategies undertaken within different structural constraints.

Furthermore, more research is needed in order to understand the relationship between the social capital of leaders and their organizational power and ability to use certain entrepreneurial strategies. This issue is significant, since social capital is known to facilitate identification of opportunities and attainment of goals. It is also important that future research examine the relationships between the different entrepreneurial strategies and various organizational outcomes, since leaders’ use of the different strategies identified in this study is likely to have a major effect on the functioning of the organization and organizational outcomes.

Although it is beyond the scope of the current study, it should be noted that school entrepreneurship in general, and radical entrepreneurship in particular, does not promise better schooling. Thus, entrepreneurship should be considered as long as it is used to advance pupils’ welfare and promotes their well-being. Hopefully, the conceptual framework developed in this study and the public school entrepreneurial inventory applied here will prove to be a meaningful and effective tool that can be used by school leaders in developing, actualizing, and assessing school entrepreneurship, in order to contribute to better schooling and education.
REFERENCES


