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Governance, Social Identity, and Entrepreneurial Orientation in Closely Held Public Companies

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Based on notions from the identity theory, this study argues that in public firms in which ownership is concentrated, owner-chief executive officer (CEO) identities will influence entrepreneurial orientation (EO), and EO will relate to superior performance. Specifically, lone founder owners and CEOs will embrace entrepreneurial identities: their firms will exhibit high levels of EO and outperform. Post-founder family owners and CEOs, given their ties to family in the organization, will assume identities as family nurturers, thereby limiting EO and performance. Family firm founders will exhibit blended identities and demonstrate intermediate levels of EO and performance. This analysis of Fortune 1000 firms finds support for these arguments.

Entrepreneurial orientation (EO) is a much-explored dimension of strategy making that has been found to arise in specific contexts and to have significant implications for firm performance (Green, Covin, & Slevin, 2008; Wiklund, 1999; Wiklund & Shepherd, 2005). Although there have been different conceptions of its components (Lumpkin & Dess, 1996), research has converged on three core dimensions of EO—innovation, risk taking, and proactiveness (Covin & Slevin, 1989; Miller, 1983). Each of these dimensions is said to contribute to the degree to which an organization is "entrepreneurial" according to earlier classical definitions of that concept (Collins & Moore, 1970; Knight, 1921; Schumpeter, 1934).

Certainly, there has been ample research on EO over the past two decades (Cherchem & Fayolle, 2008; Rauch, Wiklund, Frese, & Lumpkin, 2009). Environmental and structural correlates of EO have been investigated, revealing, for example, that EO tends to be more pronounced in uncertain environments and in firms utilizing organic structures (Becherer & Maurer, 1997; Covin & Slevin, 1989; Dess, Lumpkin, & Covin, 1997; Lumpkin & Dess, 2001). EO has also been shown to be related to market-driven strategies (Covin, Green, & Slevin, 2006; Green et al., 2008) and self-confident chief-executive-officer (CEO) personalities (Begley & Boyd, 1987; Poon, Ainuddin, & Junit, 2006;

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Simsek, Heavey, & Veiga, 2010). Most studies, however, focus not on the sources but rather the performance consequences of EO. Although findings conflict, on average, they suggest that EO tends to improve performance (see the reviews by Wiklund, 1999, and Wiklund & Shepherd, 2005).

For major, publicly traded companies, which have too rarely been a focus of EO studies, a principal potential source of EO has been neglected—namely governance conditions (Miller, 2011). We shall maintain that in many such firms, the identity of major owners and owner executives may shape EO and thereby firm performance. Indeed, the myriad studies of the relationships between ownership concentration and performance, many based on agency rationales, have been plagued by disagreements—with some revealing that major owners benefit firm performance and others finding just the opposite (Morck, Shleifer & Vishny, 1988; Shleifer & Vishny, 1997). These conflicts also characterize the literature on family firms, both empirically (see, for example, Anderson & Reeb, 2003 and Villalonga & Amit, 2006 versus Claessens, Djankov, Fan, & Lang, 2002; Holderness & Sheehan, 1988; Maury, 2006; Pérez-González, 2006; and Miller, Le Breton-Miller, Lester, & Cannella, 2007), and conceptually (compare Miller & Le Breton-Miller, 2005, and Miller, Lee, Chang, & Le Breton-Miller, 2009 to Schulze, Lubatkin, & Dino, 2003, and Schulze, Lubatkin, Dino, & Buchholtz, 2001).

This article will maintain that the identities of owners are very relevant to resolving these debates. Specifically, the social context of ownership will shape owner identities and hence their entrepreneurial preferences and the conduct and performance of their firms. We shall first lay out our general model of how role and social identities may be shaped by the different social contexts of those who govern. Then we shall generate hypotheses on how these identities develop and shape EO and firm performance in lone founder, family post-founder, and family founder firms, respectively.

Theory Development: Ownership, Identity Theory and Social Identity Theory

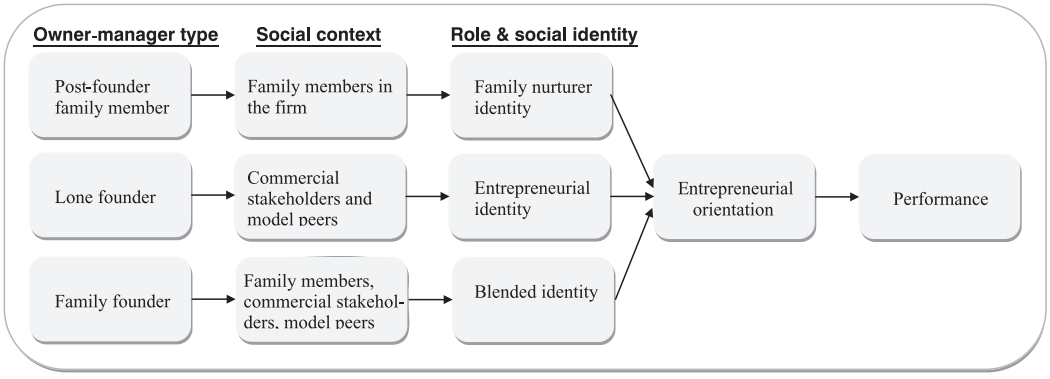
The Structure of our Model

Our thesis is that there is an important connection between the social contexts of different types of major owners and owner-managers and the role identities and social identities they assume—identities that in turn shape their priorities for their businesses, and hence the strategies and financial success of those businesses.[1] Our focus will be on three types of owners and owner-managers: those who are lone founders; and those who are family owners or managers; the latter may be either founders or nonfounders—and that is a second important contrast that distinguishes different types of family businesses and their conduct (Chrisman, Chua, & Litz, 2004; Miller et al., 2007). Lone founder identities will be influenced both by the roles they perform as business builders and by their desire to model

1. Others too have argued that owner values might shape corporate behavior (Arrègle, Hitt, Sirmon, & Véry, 2007; Greenwood, Deephouse & Li, 2007; Miller, Le Breton-Miller, & Lester, 2010, 2011). Some have focused on the social context of family owners. Naldi, Nordqvist, Sjoberg, and Wiklund (2007) did so in examining risk, in a sample of small Swedish family firms. Short, Payne, Brigham, Lumpkin, and Broberg (2009) found that family firms underplayed the dimensions of proactiveness and risk in their annual reports. These authors, however, failed to distinguish between family firms and those of lone founders. Miller et al. (2011) found that distinction to be important in their study of strategic investments to conserve or grow a business. They did not, however, focus on the risk inherent in or the boldness of those investments—aspects central to EO (Covin & Slevin, 1989; Miller, 1983).

Figure 1

Governance, Social Context, Identity, and EO



themselves after successful members of a founder peer group. Based on concepts from identity theory (IT) (Stryker, 1987) and social identity theory (SIT) (Tajfel, 1974), respectively, lone founders will be argued to adopt the roles and social identity of an "entrepreneur" business builder. Thus their firms will exhibit elevated levels of an EO and outperform. By contrast, non-founder family owners and executives of family firms will be influenced most strongly by their role-based personal relationships with other family members in their firm (Kowalewski, Talavera, & Stetsyuk, 2009; Schulze et al., 2003; Sciascia & Mazzola, 2008). IT suggests that given this familial role context in the business, these parties will adopt identities as "family nurturers" (Bertrand & Schoar, 2006; Gómez-Mejía, Núñez-Nickel, & Gutierrez, 2001; Gómez-Mejía, Takács Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). That identity, we shall argue, will foster conservatism and resource extraction from the firm to serve the family, thereby limiting EO and performance. A third group of principals we shall distinguish is that of the founder of a family business, whose social context blends that of the lone founder and the family owner-manager, and hence whose identity and conduct will also be blended (Shepherd & Haynie, 2009). For those parties and the firms they own and run, our model suggests an "average" level of EO and performance. Figure 1 summarizes our model.

We shall develop rationales for just how social identities manifest in the context of the lone founder, family post-founder, and family-founder firm—before exploring their strategic manifestations.

Identity Theory, Social Identity Theory, and Their Distinctions and Application

Identity is a core concept that links social structure to individual behavior. Identification with particular groups and adoption of a related set of roles can shape loyalties, priorities, and conduct (Stryker, 1980; Tajfel & Turner, 1979). IT and SIT are related perspectives on the way in which the socially constructed self mediates between social structure and individual behavior. Whereas IT is based in *role* identification and has a legacy in sociology, SIT is based on *group* identification and has its roots in social psychology (Hogg, 1993; Hogg, Terry, & White, 1995). Role identity is enacted as people fulfill role expectations in interacting with valued others and manipulating "the

environment to control the resources for which the role has responsibility" (Stets & Burke, 2000, p. 226). Social identity is assumed when one considers oneself a member of a valued group and sees things from its perspective, with *or without* direct interaction with that group (Ashforth & Mael, 1989).

Thus although both theories rely on self-assignment into a social category that drives behavior, largely due to the social context and activities of an individual, there are important distinctions between the two theories: IT is based on identification with a salient role a person plays; it materializes via personal relationships and roles. By contrast, SIT is based on projective identification with a group more than a role—a demographic group, for example—which one considers oneself a member of, that one may not be in contact with, and that has a clear in-group/out-group boundary that allows some experienced distinctiveness (Hogg et al., 1995; Stets & Burke, 2000).

IT, as we shall see, suggests some constraints to EO within post-founder family firms, whereas *both* IT and SIT provide reasons for higher levels of EO within lone founder firms. For family owners and executives, the family is present in the business as an integral part of the social context: thus the very salient role of father, mother, or son to other members of the firm cannot help but shape identity and behavior in the business, and hence business priorities. IT is of direct relevance here, whereas SIT is less so as it concerns less intimate, more aspiration-based, or "demographic" associations (Hogg et al., 1995; Stets & Burke, 2000).[2] Lone founders are shaped by their roles as entrepreneurs and by the parties with whom they interact in that capacity. However, especially in large, major companies, founders may also be influenced by an aspired or projected social identity with their much celebrated peers—other successful entrepreneurs, as opposed to the less exalted group of "mere" managers or administrators. Here we are squarely in the province of SIT.

We shall discuss briefly the manifestations, modes of activation, and motivations behind the identifications postulated by IT and SIT, and also show how they may influence the entrepreneurial behavior of family and lone founder owners.

Identity Theory and Family Firm Ownership

Our core argument in this section will be that given their close associations with other family members, family owners and managers will adopt family nurturer identities, which may limit EO within their firms.

According to IT, people come to know themselves by interacting with others (Cooley, 1902; Mead, 1934; Stets & Burke, 2000). Thus the self is a product of social construction, not an autonomous psychological entity but rather "a multifaceted social construct that emerges from people's roles in society" (Hogg et al., 1995, p. 256). Moreover, variations in self concepts are due to the *different roles* people occupy: mother, wife, and social worker (Stryker, 1987). Role identifications are self conceptions, self-referent cognitions, or self-definitions that people apply to themselves because of the role positions they occupy, and/or "through a process of labeling or self definition as a member of a social category" (Hogg et al. 1995, p. 256). But how do role identities become activated, what motivates their adoption, and how they are manifested?

2. Although SIT suggests that many family members will distinguish a family in-group from a complementary out-group, the latter is rather a vague and heterogeneous entity. Moreover it is the roles that family members play in a family context that have the clearest behavioral implications, and those relate more directly to IT than SIT.

Activation. Commitment to an identity has been shown to be linked to the number of persons to whom one is tied by holding that identity, as well as the strength and depth of those ties (Stryker & Serpe, 1982). Where an individual is in contact with those to whom he is close, he is more apt to enact the role that is expected of him by those individuals. For example, given the importance of the parental relationship, a father will tend to behave consistently in a fatherly role with his children (Homans, 1950). Where these relationships are close and involve multiple family members, the identity associated with that role will be reinforced.

Motivation. Identity theorists believe that a sense of self-efficacy comes to an individual as a result of properly performing a role—that is, fulfilling the expectations of valued partners. For example, a father may feel proudest and most satisfied when behaving according to the reasonable expectations of his wife and children. That sense of self-efficacy is a pivotal motivating factor contributing to role enactment and role identity (Burke, 1991; Stryker, 1968, 1987).

Manifestation. Role-based identities manifest in differentiated and complementary relationships with other members of a group. People recognize each other as role occupants and incorporate into their identities the "meanings and expectations associated with [their] role and its performance" (Stets & Burke, 2000, p. 225). Thus, for example, in a firm owned by several members of the same family, the roles they perform in the firm and just how they perform those roles will be influenced by family expectations and the roles they play in the family—as we argue below (Gersick, Davis, Hampton, & Lansberg, 1997).

Family Firm Ownership, Family Nurturer Identity, and EO. Major owners and owner-executives from the same family working together in their business tend to interact quite closely (Gersick et al., 1997; Miller & Le Breton-Miller, 2005). Their kinship lends to their associations the intensity characteristic of a primary social group: long duration, emotional closeness, and mutual dependence (Homans, 1950). Thus family members often will have a disproportionate impact on one another when acting within a business context, and may share a common familial identity, reinforced by the roles they play (Cruz, Gómez-Mejía & Becerra, 2010; Gómez-Mejía et al., 2007). Frequently therefore they will be influenced by family loyalties and bonds of familial reciprocity and altruism (Schulze et al., 2001). Family owners and executives will try often to fulfill the expectations of family members close to them and will receive socioemotional satisfaction from doing so. Thus they enact their identities by embracing roles as family protectors and nurturers as well as company principals (Gómez-Mejía et al.).

Their nurturer/protector role identities may induce family members to see the business as a source of family financial security and reward, family reputation, and careers for current and subsequent generations (Gersick et al., 1997; Lansberg, 1999; Minichilli, Corbetta, & MacMillan, 2010; Schulze et al., 2003; Ward, 2004). Thus family members acting as major owners and/or executives of their business may, in their decisions, enact their roles as family protectors and nurturers by serving the family through the business, thus sometimes trading off benefits to public shareholders against benefits to the family (Kowalewski et al., 2009; Sciascia & Mazzola, 2008; Sraer & Thesmar, 2007). For example, they may favor stable, generous dividend payments, and perquisites for family members over reinvestment in the firm or rapid growth (Bertrand & Schoar, 2006). Resources might therefore be lacking for innovation, and risk taking would be avoided as it could jeopardize a steady stream of dividend income (Bloom & Van Reenen, 2007).

Family nurturer identities also may induce family owners and executives to provide social perquisites such as jobs for relatives and contracts for family cronies (Claessens et al., 2002; Cruz et al., 2010; Gómez-Mejía et al., 2001; Volpin, 2002). That could restrict the pool of executive talent and hence managerial competency, and thus discourage risky and complex market initiatives and innovation projects (Mehrotra, Morck, Shim, & Wiwattanakang, 2010). Family resource demands, by limiting reinvestment of profits in the business, also may restrict innovation (Miller, Le Breton-Miller, & Lester, 2011). Finally, a family's desire to preserve control of the firm for later generations may cause it to extract slack financial resources from the business in order to avoid takeover threats (Morck, Wolfenzon, & Yeung, 2005). Such resources often are required to fund proactive initiatives and to cushion earnings fluctuations caused by innovation and risk taking.

In short, the components of EO—risk taking, innovation, and proactiveness—will be limited in the family firm. Risk will be avoided, resources will be extracted from the firm to limit reinvestment of earnings, and hence innovation will also be curtailed as it frequently requires such investment and risk taking (Lumpkin & Dess, 1996; Miller, 1983).

We should say that our arguments are expected to hold whether family members are merely major owners of their firms or also top executives. In this study we operationalize major ownership as owning 20% or more of the shares of a firm, and management as serving as the CEO. In both cases, the amount of family influence on key resource allocation decisions may be highly significant (Gersick et al., 1997). In other words we believe that the same identity drivers and consequences will apply whether a family principal is merely a major owner or an owner-executive, and the same hypothesis will cover both contingencies. Empirically, however, in order to establish the robustness of our framework, we shall test for each condition as well as an ownership *or* executive family firm dummy variable with less restrictive parameters. We follow this same logic and procedure for Hypotheses 1 through 3.

Our conceptual framework distinguished at the outset between lone founder and family identities, which we suggested would be quite different. Thus our analysis must take pains to differentiate not only family from lone founder firms, but family founder from family non-founder firms (Gersick et al., 1997; Miller et al., 2007). The arguments of this section pertain to the involvement of family members in the firm who are *not* founders and thus firms not directly influenced by their founders. Our first hypothesis therefore will apply only to family firms in which the founder no longer plays a significant ownership or managerial role—in other words, post-founder family businesses where there is no longer any active founding entrepreneur. However, as we will see in the next two sections, we expect things to be quite different in lone founder firms, and *also* in family firms where a founder remains present as a major owner or executive.

Hypothesis 1: Family-owned or -managed firms, post-founder, will show lower levels of EO than other firms.

Identity Theory, Social Identity Theory, and Lone Founder Ownership

Our core argument in this section will be that given their associations with a firm's commercial stakeholders and backers and their career orientations, lone founders will adopt entrepreneurial identities which will enhance EO within their firms. Whereas IT was used to understand the priorities of family owners and executives, *both* IT and SIT will be helpful in analyzing the priorities of lone founder owners and executives.

Identity Theory

According to IT the behavior of *lone* founders will be molded by the parties with whom they interact—bankers, investors, suppliers, key employees—and the roles founders must play in serving those parties. All of these stakeholders are likely to prioritize *economic* interests: bankers and suppliers want to get paid; investors, partners, and venture capitalists desire a good return on their capital; key employees prize financial benefits and opportunities for career advancement. Certainly, the behavior of founders may be influenced as they try to meet the commercial aspirations of all of these parties. In that respect, they must adopt the entrepreneurial role—one of a growth-oriented, venturesome, organization-builder.

Unlike family members within a family firm, one set of stakeholders can rarely monopolize the attention of the founder: there are no emotionally constraining family ties. Hence for founders, the commercial and economic agenda is apt to take top priority—and the founder may act with significant independence to pursue it. That independence is doubly important as identity among entrepreneurs is often as much a function of *aspiration* as social interaction and roles (Langlois, 2007).

Social Identity Theory

SIT provides a complementary perspective on why founder firms may be entrepreneurial. Whereas IT views direct interpersonal interactions and role identities as determinative of normative priorities and behaviors, SIT views group identities as the key drivers (Hogg, 1993; Tajfel, 1974). Groups may relate to political affiliation, gender, race, and work unit. People are said to identify with the groups they perceive themselves to be members of, and they view as inferior or less desirable contrasting groups (e.g., Democrats vs. Republicans) (Ashforth & Mael, 1989). This attitude has been seen time and again in the entrepreneurial literature among entrepreneurs who are proud to characterize themselves as business builders, creators, and risk takers rather than, *and in contrast to*, mere administrators or managers (Langlois, 2007; Shapero, 1975). Indeed, the existence of this more conservative comparison group of "mere managers" as opposed to entrepreneurial founders may contribute to the entrepreneurial social identity, one in which an individual considers himself a business creator, owner, and builder as opposed to purely an administrator or executive (Haslam, 2001; Tajfel).

People adopt multiple group identities that become salient in particular social contexts. Importantly, they may or may not have frequent contact with members of their identity group, and are influenced in their identity by their aspirations and occupations (Hogg & Terry, 2001; Tajfel & Turner, 1979)—for example, as founders of a business (Becker & Carper, 1956). Identifications may be more or less conscious and do not surface in every situation. They are however manifested consistently and in multiple ways in the priorities and behavior patterns people exhibit (Hogg & Vaughan, 2002). Again it is useful to ask how social identities become activated, what motivates their adoption, and how are they manifested.

Activation. The lone founder, in his or her capacity as a founder, engages in many activities that enact, reinforce, and remind a founder of his or her entrepreneurial social identity: fund raising and financing growth, negotiating with stakeholders, staffing executives, broaching new markets, and building a business and all of its functions and capabilities. That identity is also reinforced by inherent interests, personality, and aspirations (Miller & Toulouse, 1986), as well as by interaction with and publicity about *other entrepreneurs* who may serve as role models (Langlois, 2007). Indeed there is in

American culture an entrepreneurial ethos that celebrates venturing, risk taking, and innovation as well as growth and commercial success—a culture to which founders, given their occupations and preoccupations, may feel a natural affinity (Hitt, Ireland, Camp, & Sexton, 2002). All of these forces may inculcate in founders an entrepreneurial social identity.

Motivation. The adoption of an entrepreneurial social identity need not require serving a group to which one is loyal; it may be stimulated instead by sharing key characteristics with typical or model members of an admired group, thereby enhancing attitudes of self-efficacy (Hogg & Terry, 2001). Hence entrepreneurs may be motivated to emulate the behavior of successful entrepreneurs or entrepreneurial archetypes—those whom they have read about, those whom they have met, and those whom they compete against and present them with the most inspiring and fulfilling challenges.

Manifestation. Group-based identities manifest in various uniformities of perception with others in the group (Oakes, Haslam, & Turner, 1994). As people tend to evaluate members of their own group more positively than outsiders (Ellemers, Spears, & Doosje, 2002), they also behave in concert with group norms (Simon et al., 1998). In short, group-based identities create uniformities of cognition, attitudes, and behavior (Stets & Burke, 2000).

Lone Founders, Entrepreneurial Identity, and EO

From the perspective of IT, founders will be influenced by their interactions with financially oriented stakeholders such as investors and venture capitalists; those interactions will engender priorities such as attaining superior financial performance and growth—typically via the bold and innovative orientations that can achieve such growth (Kirzner, 1979; Knight, 1921).

From the perspective of SIT, lone founders will wish to emulate their role models—successful entrepreneurs. Firm founders typically will have had opportunity to witness the behavior of other entrepreneurs—by studying competitors or partners, joining business associations, and reading the popular business press. All of these exposures can make founders aware of and attracted to their entrepreneurial cohort—a group of which their own experiences, priorities, and preoccupations may induce them to consider themselves members (Tajfel & Turner, 1979). Again, that entrepreneurial group identity may be reinforced and will shape behavior as it represents in America a socially legitimized and often popularly celebrated archetype (Thornton & Ocasio, 2008). It is, in essence, one of the bold, venturesome business builder, innovator, and risk taker (Schumpeter, 1934), who behaves proactively in creating new products and identifying market opportunities (Jayaraman, Khorana, Nelling, & Covin, 2000; Kirzner, 1979; von Hayek, 1989). Although these aspects of entrepreneurship are derived from the popular business and historical literature, they correspond closely to the dimensions of EO defined by Covin and Slevin (1986), Miller (1983), and most of their followers: namely, proactiveness, innovation, and risk taking. In short, lone founders, given their sources of identity, will be motivated to pursue an EO.

Hypothesis 2: Lone founder-owned or -managed firms will exhibit higher levels of EO than other firms.

Blended Identities: The Case of the Family Business Founder

We have argued that given their family context, family owners and managers will adopt familial identities and roles as family nurturers and protectors that will attenuate an EO. We have also argued that lone founders will identify with other entrepreneurs—a venturesome group—and embrace an EO. According to both IT and SIT, the influential parties with whom a person interacts and the roles they play *vis-à-vis* those parties will shape their identities (Hogg et al., 1995). It is also true that people exhibit multiple identities (Stryker, 1980). Hence, the *founders* of family firms, given their close interactions with both family and commercial stakeholders, as well as their exposure to a cohort of founder-entrepreneurs, will be influenced both by their identities as family members and as entrepreneurs (Shepherd & Haynie, 2009). Thus the EOs of their firms are expected to lie somewhere between the higher levels expected of lone founders, and the lower levels expected of family firms in which the founder is no longer present.

Hypothesis 3: Family firms in which the founder remains active will exhibit levels of EO that fall between those of lone founder and later generation family firms.

Ownership, EO, and Performance

It has been argued that EO is positively related to performance (Wiklund & Shepherd, 2005). Although there has been some controversy and important qualifiers applied to this relationship (Wiklund, 1999), it has not been investigated as it relates to governance in major public corporations. We believe that EO will be positively associated with the total shareholder returns and market valuations of corporations. The latter measure is assessed as Tobin's q—essentially the market-to-book ratio, which reflects the premium the market is willing to pay for a firm's assets taking into account all of the information it has collectively on past and prospective outcomes. This indicator is considered by scholars of finance to be superior to profitability measures of performance, which are subject to accounting anomalies and earnings manipulations (Villalonga & Amit, 2006).

Firms can only enhance total shareholder returns by adapting to their changing settings, building up their capabilities and offerings, and competing aggressively (Helfat, 2007). That entails risk taking, proactive initiative, and innovation. Investors recognize that and will thus put a premium on the market values of firms that exhibit higher levels of EO; these were argued to be lone founder firms. Conversely, to the extent that family firms exhibit *lower* levels of EO, they will underperform in both total shareholder returns and Tobin's q.

Implicit in the above argument is that EO is a partial mediator of the relationship between ownership status and performance. The requirements for partial mediation specified by Baron and Kenny (1986) are as follows: ownership will be related to EO (H4a), EO will be related to performance (H4b), and, as a consequence of the mediation, a significant relationship between ownership and performance will decline when we control for EO (H4c).

Hypothesis 4a: EO will be positively related to performance.
Hypothesis 4b: Family ownership and management will be negatively related to performance; lone founder ownership and management will be positively related to performance.

Table 1

Governance, Context, Identity, and Entrepreneurial Orientation

	Family firms post-founder	Lone founder firms	Family founder firms
Focal actors	Family firm owners &/or top executives	Lone founder owners &/or top executives	Family firm founder owners &/or top executives
Relevant theory	Identity Theory	Identity *and* Social Identity Theory	Identity *and* Social Identity Theory
Most salient role correspondents	Family members in the business	Commercial stakeholders	Family and commercial stakeholders
Social reference group		Model peer entrepreneurs	Model peer entrepreneurs
Identity	Family nurturer	Entrepreneur	Blended identity
Entrepreneurial orientation	Lower	Higher	Average
Firm performance	Inferior	Superior	Average

Hypothesis 4c: A significant relationship between performance and ownership/management status will decline when we control for EO.

Table 1 summarizes our reasoning.

Method

Sample

The sample comprised the *Fortune* 1000, encompassing 500 industrial companies and 500 service firms. Data on only 898 companies were analyzed because we restricted our sample to firms with publicly accessible data from the period 1996 to 2000. From these we identified 263 family firms (81 family founder, 182 post-founder), 141 lone founder firms, and 492 "other" firms. This breakdown is similar to that of other scholars of large United States public companies (see the review by Miller et al., 2007).

Variables and Sources of Data

Variables were assessed at two levels and in two stages. First, data were gathered on individual officers and directors, 5% blockholders, and large institutional investors. We collected information on share ownership, vote control, family and lone founder executive positions, and super voting shares from the following sources: individual company proxies (which were the primary and definitive source of data), Compact Disclosure, Hoover's, and company web sites. Where proxies lacked information on kinship between board members, managers, or the founder, we approached companies directly. A team of five research assistants and three of the authors gathered data from the proxies over a two-year period. Two weeks of training were needed for each research assistant to ensure accuracy in data collection as some families controlled their firms in subtle ways—for example via trusts and banks; moreover, family names could change due to marriage.

We designated as the focal family the one with the most votes. In computing family shareholdings, we added shares of co-trustees of family trusts who were directly

employed by the family. Although previous researchers (e.g., Anderson & Reeb, 2003; Villalonga & Amit, 2006) classified firms like Microsoft and Amazon as founder family businesses, we did not since there was no family involvement. Instead, following the practice of Miller et al. (2007), we classify them as lone founder businesses. By contrast, we do count firms such as Comcast and Qualcomm as family firms as there are multiple relatives of the owning family serving as owners and officers.

Data on individuals were aggregated to the firm level, for which we could collect information on strategy, governance, and performance. Accounting data were taken from COMPUSTAT, and market performance data were obtained from the Center for Research on Security Prices of the University of Chicago (CRSP). Our variables and their data sources are defined in Table 2, while Table 3 presents the descriptive statistics.

For purposes of preliminary classification, a firm was assigned to the lone founder category if it had a single founding owner or unrelated founders serving as officer or director, and/or owning more than 5% of the shares. No family member of the founder could be involved in the business as an officer, director, or owner. A firm was assigned to the family category where there were *multiple* members from the same family who served as officers, directors, or >5% owners, contemporaneously or as a founder's descendents (mean family ownership of family firms was almost 20%). For family firms, we also distinguished those firms where the family founder was present as chairman or CEO from post-founder family firms. The comparison sample was other non-family and non-founder firms on the *Fortune* 1000.

Models

Dependent Variables. Most studies of EO are of small companies and rely on the opinions of executives. This research studies far larger organizations and focuses on less subjective indicators of EO. A strength of this method is its objectivity (Miller, 2011); a weakness is its inability to poll directly the entrepreneurial intentions and opinions of the owners and leaders of the firms.

Miller (1983) suggested that a firm's EO was a joint function of the variables of innovation, proactiveness, and risk taking (see also Covin & Slevin, 1986; Rauch et al., 2009). This conception has been employed in many dozens of studies (see the reviews by Cherchem & Fayolle, 2008, and Wiklund, 1999). Thus, following ample historical precedent, we assessed a composite index of EO by operationalizing those three variables.

Innovation. We required a measure of innovation that would apply to a broad array of businesses and could be obtained from reliable published sources. We began with the reasoning that firms that invest more abundantly than their competitors in product and process research and development, broadly defined, tend to be more innovative (Hall, 2002; Hansen, 1992; Lee & O'Neill, 2003). It was possible to obtain accurate information on research and development expenses, which were a 10 K statutory reporting requirement for all public companies. These data are reliable because they must be supplied to the government. Thus the research and development (R&D) to sales ratio was used to capture innovation. The SEC defines R&D expenses as:

> All costs incurred during the year, by the company in question, that relate to the research and development of new products, processes, or services. Such expenditures generally include related software expenses and amortization of software costs. They generally exclude the following items: (1) customer or government-sponsored R&D

Table 2

Variable Definitions

Variable	Definition
Lone founder firm	A binary variable, 1 indicates presence of a lone founder serving as an officer, director or large (5%) owner, with no relatives serving as officers, directors or owners. Source: Firm Proxy
Family post-founder firm	A binary variable, 1 indicates presence of multiple family members serving as officers, directors, or large (5%) owners, at the same time or as descendents of the founder, with the founder *no longer* serving as an officer of the business. Source: Firm Proxy
Family founder firm	A binary variable, 1 indicates presence of multiple family officers, directors or large (5%) owners, at the same time or as descendents of the founder, while the founder continues to serve the business as an officer. Source: Firm Proxy.
Lone founder CEO	A binary variable, 1 indicates that a lone founder serves as chief executive officer (CEO), with no relatives serving as large owners, officers, or directors. Source: Compact Disclosure; Firm Proxy.
Family post-founder CEO	A binary variable, 1 indicates that a family member serves as CEO after the founder has left the business. Source: Compact Disclosure; Firm Proxy.
Family founder CEO	A binary variable, 1 indicates that a family founder serves as CEO. Source: Compact Disclosure; Firm Proxy.
Lone founder 20%+ owner	A binary variable, 1 indicates that a lone founder owns over 20% of the firm with no relatives serving as large owners, officers, or directors. Source: Compact Disclosure; Firm Proxy.
Family post-founder 20%+ owner	A binary variable, 1 indicates that a family owns over 20% of the firm after the founder has left the business as an officer. Source: Compact Disclosure; Firm Proxy.
Family founder 20%+ owner	A binary variable, 1 indicates that a family owns over 20% of the firm while the founder remains as an officer of the company. Source: Compact Disclosure; Firm Proxy.
Entrepreneurial orientation (EO)	Sum of standardized scores for innovation, reinvestment, and risk (i.e., R&D, reinvestment of profits, and unsystematic risk as defined below). Both summative and reflective indexes were computed.
Innovation	Research and development expenses divided by total sales. Source: Compustat.
Proactive reinvestment	The percentage of annual earnings reinvested within the company. Source Compustat
Unsystematic risk	The risk of a price change in firm market value due to firm-specific circumstances. Derived by regressing firm-specific return on a value weighted return of the market as a whole, and retaining the root mean square error from the regression. Source: Center for Research on Security Prices of the University of Chicago (CRSP).
Tobin's q	The ratio of the firm's market value to book value calculated as follows: (common shares outstanding * calendar year closing price) + (current liabilities-current assets) + long-term debt + liquidating value of preferred stock) all divided by total assets. Source: Compustat.
Total shareholder returns (TSR)	TSR represents a firm-level market performance measure obtained by compounding each firm's daily market returns in its respective fiscal year. Source: CRSP.
Firm age	The difference between the year 2000 and the firm's founding year. Source: Firm Proxy; Firm website; Lexus-Nexis; Hoovers.
Firm size (log of sales)	The natural log of annual net sales. Source: Compustat.
Inside directors ratio	The ratio of inside directors to total directors. Source: Firm Proxy.
5% owners	The ownership percentage of all non-family or non-lone-founder blockholders who hold a 5% or greater ownership stake. Created by summing the non-family or non-founder 5% or greater ownership stakes and dividing this by the firm's total shares outstanding. Source: Compact Disclosure; Compustat; Firm Proxy.
Supershares	A dummy variables set to equal 1 when a firm has a vehicle in place which creates a differential source of power. Example: differential voting over various classes of stock. Source: Compact Disclosure; Firm Proxy.
Beta (market risk)	The average value weighted returns in which the firm's daily returns are regressed against the returns of the overall market. Source: CRSP.
Investment	Capital expenditures divided by plant property and equipment. Source: Compustat.
Debt to equity ratio	Long-term plus short-term debt divided by the market value of common equity. Source: Compustat.

(including reimbursable indirect costs); (2) extractive industry activities, such as prospecting, acquisition of mineral rights, drilling, mining, etc.; (3) those engineering expenses directed toward routine, ongoing efforts to define, enrich, or improve the qualities of existing products; (4) inventory royalties; and (5) marketing research and testing. (Shepherd & Payson, 1999, p. 16)

Table 3

Descriptive Statistics[†]

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 EO	0.08	1.95	1.00															
2 Proactive investment	0.91	0.11	0.71	1.00														
3 Unsystematic risk	0.11	0.06	0.74	0.43	1.00													
4 Innovation	0.02	0.04	0.54	0.00	0.05	1.00												
5 Family founder firm	0.09	0.29	0.06	0.11	0.09	–0.09	1.00											
6 Family firm—post-founder	0.20	0.40	–0.13	–0.16	–0.08	–0.01	–0.17	1.00										
7 Lone founder firm	0.19	0.39	0.28	0.34	0.22	0.00	–0.15	–0.25	1.00									
8 Tobin's q	1.98	1.87	0.28	0.13	0.08	0.35	0.01	–0.05	0.20	1.00								
9 Total shareholder return	0.21	0.62	0.09	0.10	0.02	0.06	0.04	–0.04	0.10	0.40	1.00							
10 Beta	0.82	1.16	0.23	0.17	0.17	0.11	0.05	–0.04	0.12	0.14	0.09	1.00						
11 Investment/PPE	0.22	0.17	0.39	0.32	0.28	0.18	0.13	–0.05	0.23	0.34	0.12	0.19	1.00					
12 Debt/equity	0.59	1.03	0.04	0.07	0.20	–0.18	–0.02	–0.07	0.03	–0.26	–0.25	–0.05	–0.16	1.00				
13 5% owner	0.22	0.22	0.12	0.13	0.13	–0.03	–0.03	–0.11	–0.02	–0.13	–0.06	0.00	0.01	0.15	1.00			
14 Supershares	0.11	0.31	0.02	0.04	0.06	–0.04	0.11	0.17	0.11	0.00	0.00	0.01	0.04	0.10	–0.01	1.00		
15 Inside directors ratio	0.24	0.15	0.18	0.25	0.18	–0.06	0.24	0.04	0.19	0.07	0.04	0.09	0.20	0.03	–0.06	0.10	1.00	
16 Firm size	8.02	1.12	–0.13	–0.23	–0.14	0.10	–0.10	0.00	–0.19	0.00	–0.07	–0.06	–0.13	–0.03	–0.10	–0.07	–0.24	1.00
17 Firm age	60.10	44.27	–0.30	–0.42	–0.29	0.10	–0.20	0.19	–0.38	–0.10	–0.09	–0.12	–0.28	–0.05	–0.08	–0.05	–0.27	0.29

[†] Correlations greater than 0.07 or less than –0.07 are significant at $p < 0.05$.
PPE, property, plant, and equipment.

Whereas some studies use patents as an indicator of innovation, patents are counterproductive in many industries that cannot easily enforce them or where these are disclosure liabilities (Lee & O'Neill, 2003).

A limitation of the R&D measure is that it does not incorporate innovations reflected by expenditures on new forms of organization, training programs, market research, or for mines prospecting, which is a routine function. These activities could not be assessed. Moreover, where R&D is so minimal as to be "not material to decision making," there is no statutory requirement to report it. Thus, firms that do not report R&D must be assumed to have a very low level of expenditure but cannot be assumed strictly to have a zero level. However, this zero figure represents important information as it distinguishes firms that do innovate and report from those that innovate little in most product and process categories.

Nonetheless, in order establish the impact of including zero R&D expenditure statistics in our data we reran all analyses of Tables 4 and 5 dropping the zero observations. The results replicated very well. Specifically, none of the significant results related to our hypotheses became non-significant, and none of the non-significant results became significant.

Proactiveness. Proactiveness represents a company's tendency to engage in strategies of proactive engagement to build the business rather than those of harvest or retrenchment (Miller, 1983). In publicly available financial data, that tendency may best be illustrated in the aggregate investment practices of the firm—in short, what does the firm do with the funds it reaps in profits? This was assessed using the percentage of profits reinvested in the company each year compared with that of rivals in the same industry. We use this figure rather than investment in any given expense or capital category as this is a multi-industry study in which different strategies and investment patterns have relevance (Helfat, 2007). Moreover, using only a measure of immediate specialized investment spending would have ruled out a firm's building up resources to take bolder action in the near future versus only making opportunistic current moves (Kaplan & Zingales, 1997).

A limitation of this measure is that it does not reveal the details of the nature of the investment: is the firm just updating equipment to catch up, is it making bold forays into the territory of the competition, or is it pioneering a greenfield strategy? Thus given the limitations of a multi-industry publicly available database, our proactiveness measure is rather an "overall indicator" that should be measured over a period of years and be industry adjusted. This we have done.

Risk Taking. Risk taking is the propensity of a company to make bold moves—those that risk significant capital and face a good deal of uncertainty. We believe that risk taking is best reflected by the fluctuations that a firm experiences in its market valuation *vis-à-vis* other firms in its industry. For example, risky and bold product launches, acquisitions, and market forays will in general cause greater fluctuations in share prices than small, incremental moves. This idiosyncratic or "unsystematic risk" was assessed according to the magnitude of the fluctuations in a firm's share price that could not be attributed to industry or economic factors (Fama, 1968).

The limitation of this measure is that some idiosyncratic share price fluctuations may be caused by factors partly or wholly beyond managerial control: labor shortages or strikes, the loss of a major client or executive, and nationalizations. Nonetheless, by assessing such fluctuations over a 5-year period, many of these exogenous shocks should diminish in importance, and the overall level of idiosyncratic share price volatility will reflect to a good degree the riskiness of managerial initiatives.

All variables were assessed for skewness and kurtosis, and where necessary were log transformed; outliers were Winsorized, that is, converted to their respective variable's 99th or 1st percentiles, as appropriate. Variables were standardized before being summed for inclusion into the EO measure. Variable definitions are presented in Table 2.

As our EO composite was derived from prior theory (Covin & Slevin, 1986; Miller, 1983) rather than empirically, its statistical properties were evaluated. The inter-item correlation alpha was 0.43, which is acceptable for a broad construct of only three components (Van de Ven & Ferry, 1980, pp. 78–81). The EO composite constitutes a summative (formative) index, *not* a reflective unidimensional construct (Diamantopoulos & Winklhofer, 2001). This is consistent with recent research that suggests EO components may vary independently (Lyon, Lumpkin, & Dess, 2000; Rauch et al., 2009), and is true to the original scale construction of the foundational work on EO (Covin & Slevin, 1986; Miller, 1983). However, to ensure robustness, we also ran all analyses using the first principal factor extracted from the three component variables—i.e., a reflective index (this was the only factor with eigenvalue exceeding 1). In all cases the results for this reflective index corresponded extremely closely to those from the summative index and did not change the findings in any material way (these analyses are available from the first author). Finally, given the breadth of the composite index, we present summary results for each of its three component variables in Table 6. These are from identical panel models, incorporating the same control variables as are presented in Table 4. Although there is significant commonality in the findings across variables, there are also some differences, which we discuss in the Findings section. In order to ensure adequate coverage, performance hypotheses were assessed both according to total shareholder returns and Tobin's q, essentially, the market-to-book ratio.

Predictor Variables. To test Hypotheses 1, 2, and 3 we employed dummy variables to indicate whether our companies were lone founder firms, family firms in which the founder was no longer present in the business (post-founder), or family founder firms. We also tested these hypotheses using predictor dummies indicating whether: (1) lone founders, post-founder family members, or family founders *served as CEOs*; (2) lone founder firms, post-founder family firms, or family founder firms, respectively, had lone founders or collective family *shareholdings of greater than 20%*—a decisive percentage for effective control in most Fortune 1000 firms (Shleifer & Vishny, 1997). Table 2 defines these variables in greater detail.

Control Variables. EO may be influenced by a firm's industry, age, and size. For example, EO is apt to be higher in high tech environments than in stable commodity industries. Therefore all of our models control for the following factors: industry at the two-digit SIC level, firm age, and the natural log of sales (firm size). Controlling for age and size, moreover, takes into account the corporate life cycle, which may influence a firm's EO and performance. The models also control for conditions of governance. These include the presence of inside directors and of major (5%) non-family or non-lone founder blockholders who might mitigate the perspectives of other major owners (Shleifer & Vishny, 1997). We controlled too for special voting shares ("supershares") that can augment family or lone founder control (Maury, 2006; Morck et al., 2005). Finally, we incorporated firm beta—or market risk as it can influence risk-taking behavior. Following Anderson and Reeb (2003) and Villalonga and Amit (2006), our models assessing the performance hypotheses control for the variables mentioned earlier as well as two others: investment (capital expenditures/property, plant, and equipment), and debt/equity, which have been shown by the above studies to impact performance.

Analyses and Robustness. Tables 4 and 5 present our time-series, cross-sectional findings, reporting results from generalized estimating equation models (Zeger, Liang, & Albert, 1988). These panel models were especially appropriate given the temporal stability of the predictor dummies (Liang & Zeger, 1986). They also incorporate Huber–White clustered standard errors, control for unobserved firm fixed effects, and adjust for firm-specific autocorrelation (Peterson, 2009). As the models are not maximum likelihood, chi-square is the only available goodness of fit measure. All models are statistically significant at beyond the 0.001 level.

To establish the robustness of the findings of Tables 4 and 5, we ran parallel OLS models using 5-year averages of the same variables. These models, available from the authors, incorporate only firms for which ownership status did not change over the 5 years for which data were collected. We found that where hypothesized coefficients were significant in the predicted direction for the panel analyses of Tables 4 and 5; all were also significant in the predicted directions for the OLS analyses.

Table 4

Panel Regressions of EO on Ownership and Management

	Model 1:		Model 2:		Model 3:	
	H1, H2, H3		H1, H2, H3		H1, H2, H3	
	Dummy		CEO		≥20% Ownership	
Entrepreneurial orientation	β	SE	β	SE	β	SE
Family firm—post-founder	–0.308***	0.103				
Lone founder firm	0.566***	0.140				
Family founder firm	0.049	0.167				
Family CEO—post-founder			–0.496***	0.134		
Lone founder CEO			0.625***	0.171		
Family founder CEO			0.392	0.243		
Family = 20% ownership—post-founder					–0.418**	0.166
Lone founder = 20% ownership					0.738***	0.203
Family founder = 20% ownership					0.095	0.236
Beta	0.062***	0.014	0.060***	0.016	0.052**	0.017
5% owner	0.533**	0.197	0.480*	0.206	0.567**	0.216
Supershares	–0.048	0.153	–0.068	0.183	–0.067	0.228
Inside directors ratio	1.255***	0.316	1.231***	0.326	1.346***	0.358
Firm size	0.096**	0.036	0.093*	0.040	0.084*	0.044
Firm age	–0.006***	0.001	–0.005***	0.001	–0.006***	0.001
Industry membership[†]						
N	4,156		3,226		2,752	
Wald chi-square	18,500***		36,849***		2,324***	
Number of firms	873		696		578	

* $p = 0.05$, ** $p = 0.01$, *** $p = 0.001$

[†] For parsimony results for 48 separate two-digit Standard Industrial Classifications (SICs) are suppressed.

Table 5

Panel Regressions of Firm Performance on EO

	Model 1		Model 2		Model 3		Model 4	
	H4a		H4b,c		H4a		H4b,c	
	Tobin's q		Tobin's q		TSR[§]		TSR	
Firm performance	β	SE	β	SE	β	SE	β	SE
EO	0.055**	0.021	0.049*	0.021	0.035***	0.009	0.032***	0.009
Family firm—post-founder			–0.087	0.087			–0.008	0.021
Lone founder firm			0.572***	0.144			0.093***	0.030
Family founder firm			0.017	0.173			0.029	0.035
Beta	0.010	0.020	0.010	0.020	0.021	0.014	0.019	0.014
Investment	0.346	0.344	0.345	0.343	0.192	0.124	0.181	0.125
Debt/equity	–0.199***	0.018	–0.201***	0.018	–0.162***	0.009	–0.162***	0.009
5% Owner	–1.055***	0.197	–0.991***	0.195	–0.025	0.038	–0.013	0.039
Supershares	–0.203	0.145	–0.242[†]	0.147	0.021	0.028	0.012	0.028
Inside directors ratio	–0.036	0.295	–0.096	0.294	–0.038	0.070	–0.055	0.070
Firm size	–0.077	0.051	–0.066	0.050	–0.029***	0.009	–0.027***	0.009
Firm age	–0.003**	0.001	–0.001	0.001	–0.001**	0.000	0.000[†]	0.000
Industry membership[†]								
N	4,150		4,145		4,161		4,156	
Wald chi-square	1,805***		2,065***		2,123***		2,668***	
Number of firms	871		871		873		873	

[†] $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
[‡] For parsimony results for 48 separate two-digit SICs are suppressed.
[§] Total shareholder returns.

Endogeneity problems may arise in examining the relationships between EO and performance (hypothesis 4a) even when controlling for ownership structure (hypothesis 4c). For example, not only may EO influence performance, good or poor performance might also cause a change in EO—due to lack of funds, for example. Following Greene (2003; Chapter 5), in order to adjust for endogeneity in the relationship between EO and performance we used instrumental variable (IV) two-stage least squares regressions. We first estimated predicted values by regressing EO onto lagged values for sales growth, firm age, firm size, industry, and beta. We then used these predicted values in a second stage predicting performance, in all cases adjusting standard errors for the two-stage process and including the same control variables as in Table 5. The IV results confirmed all of those of Table 5 at the same or better levels of statistical significance (the detailed analyses are available from the authors).

A number of further measures were employed to establish the robustness of our findings. Multiple indicators for ownership and management were investigated. For example, we ran all analyses for the CEO-Chairman and Chairman positions using the same control variables as on Table 4. But these findings were so close to the

Table 6

Robustness Checks for Panel Models of Table 4 (EO components)‡

	Dummy			CEO			≥20% Ownership		
	Family-post-founder	Founder	Family founder	Family-post-founder	Founder	Family founder	Family-post-founder	Founder	Family founder
Proactive investmentt	−2.47**	4.01***	0.66	−2.76*	4.36***	0.83	−1.89†	3.32***	1.38
Unsystematic risk	−1.15	3.91***	1.71†	−1.70†	3.69***	2.38*	−1.13	3.68***	−0.55
Innovation	−2.40*	−0.33	−2.77*	−3.25***	−0.59	−1.05	−1.24	−0.65	−1.90†

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

‡ Results from nine panel models with the same specifications and control variables as for Table 4.

CEO results we report that we refrain from presenting them. Finally, we systematically varied our sets of control variables: specifically, beta, and supershares individually were added to/deleted from our models with no material changes in the findings for the hypotheses. In summary, the vast majority of our findings were consistent across different sets control and component variables, and across different types of analyses (cross-sectional, panel, and IV regressions). Any significant differences are reported below.

Findings

As can be seen from Table 4, EO in lone founder companies is higher than that of other firms, for post-founder generation family firms it is less than other firms, and for family founder companies it is no different than for other firms. Thus hypotheses 1, 2, and 3, respectively, are supported. That is the case for the dummy variables that reflect whether a company is a founder firm, a family founder firm, or a family post-founder firm; it is also the case for dummies reflecting whether the firm's CEO is a founder, family founder or later generation CEO; finally, it is the case for dummies reflecting whether a founder, or a family in the founder or post-founder phase owns more than 20% of the company (a dominant ownership position in this Fortune 1000 sample). Thus hypotheses 1, 2, and 3 receive robust support. As noted, these results hold true whether we use the summative index of EO that we report or the reflective index derived from a factor analysis, and whether we use the panel regressions reported, OLS runs of 5 year averages, or IV regressions.

However, there *are* differences in these findings among the subcomponents of EO. Table 6 presents the summary statistics from models using the same controls as Table 4. The reinvestment of profits and unsystematic risk components of EO behave similarly and are in line with the overall EO index. By contrast, the R&D component indicates that lone founder firms do not do more nor less R&D than other firms. Perhaps this is because the founding generation must concern itself with the expenses and uncertainties of start-up and cannot spare too many resources for R&D. It is instructive, however, that in the case of family firms, founder and otherwise, R&D is significantly lower than at other companies. This is in line with our expectations for family post-founder firms, but not for family founder firms—for which the same arguments concerning uncertainties and start-up costs may apply.

Table 5 shows that EO is positively associated with both total shareholder returns and with Tobin's q, thereby supporting hypothesis 4a. In order to assess hypotheses 4b and 4c on the mediating effects of EO (we expected EO to mediate the relationships between owner identity and performance), we controlled for EO in examining the relationship between ownership status and performance. H4b received only partial support: both indexes of performance were significantly and positively associated with lone founder firm status, but neither index of performance was related to family firm status. H4c, however, was supported. The significant relationships between lone founder status and both indexes of performance declined, although they remained significant, when we controlled for EO (the coefficients fell from 0.599 to 0.572 and from 0.106 to 0.093 for Tobin's q and TSR, respectively). The significant association between lone founder ownership and performance, and its decline when we control for EO, suggests that for founders, EO is a partial mediator between ownership status and performance (Baron & Kenny, 1986).

Discussion

We developed a general model of how role and social identities may be shaped by the different social contexts of those who govern, and how these identities might in turn influence EO and hence performance. Then we showed how this occurred in lone founder, family post-founder, and family founder firms, respectively. We found that in public firms in which ownership is concentrated, owner-CEO identities influenced EO, and EO was in turn associated with superior firm performance. Specifically, *lone founder* owners and CEOs, given their roles, associations, and aspirations seemed to embrace entrepreneurial identities; their firms exhibited high levels of EO and outperformed. By contrast, post-founder *family* owners and CEOs, given their close ties to family members in the organization, appeared to embrace identities as family nurturers; their responses to family demands for security and resources limited EO and constrained performance. Family firm founders exhibited blended identities and their firms demonstrated intermediate levels of EO and performance.

The current study makes several contributions. First, it suggests that IT and SIT may be more useful lenses than agency theory for understanding the behavior of different types of personal owners of public companies. The identities of substantial owners may have a critical impact on their entrepreneurial behavior. That orientation, in turn, can have an important bearing upon performance. Subsequent studies of governance would do well to consider such identities.

Our study also addresses a void in the literature on EO, one that has emphasized outcomes such as performance and strategic behavior more than causes (Cherchem & Fayolle, 2008; Rauch et al., 2009; Wiklund & Shepherd, 2005). When causes were examined, owner and owner-manager identities have been ignored. Moreover owners have been characterized largely according to their personalities (e.g., Miller & Toulouse, 1986; Shapero, 1975), not their social contexts. Yet the social identities of different types of owners appear to be critical factors in explaining EO.

Indeed, there has been too little done on the governance drivers of EO (Rauch et al., 2009). This article has shown that those who own and run a firm, even a very large one, have a vital impact on EO. This complements the literature that has hitherto emphasized various environmental, organizational, and structural drivers of intrapreneurship in larger companies (Covin et al., 2006; Dess et al., 1997; Green et al., 2008; Lumpkin & Dess, 2001). Our study finds a potential convergence between the drivers of entrepreneurship in these large Fortune 1000 behemoths, and the owner-manager characteristic drivers found to hold among very small and simple organizations, where such a finding is no longer very surprising (Begley & Boyd, 1987; Miller, 1983; Miller & Toulouse, 1986; Poon et al., 2006). In this sense, this study takes us back to the owner-manager roots of EO and its sources and consequences.

Another advantage of our study is the use of promising theory in a field that has often neglected theory. The work on EO has been extremely rich and revealing, but it would be useful at this stage to connect it more to other theories in the social sciences to expand its influence into fields such as corporate governance, and other more socially conditioned perspectives of organizations. A recent trend to use more theory in the EO field has begun to show great promise, and this study extends that effort (see, e.g., Dess et al., 1997; Green et al., 2008; Wiklund & Shepherd, 2003, 2005).

Our study is also unusual in its sample and its measures. Most prior research on EO has been on smaller private organizations (Rauch et al., 2009). Yet large public firms are a major and critical part of the American economy, and one in which the sources and

consequences of EO have not been well established (Short et al., 2009). Moreover, EO turns out to be an important driver of success for these large firms. Finally, whereas most past studies have used the subjective Covin and Slevin (1989) and Miller (1983) scales to assess EO, this research uses objective indicators of the construct, in the hope that these will produce results that are replicable and cumulative as the field progresses.

Finally, our study makes new use of IT and SIT, applying them to the important EO and corporate governance domains, and in the process, showing some additional insights to be provided by these perspectives. Most studies of IT and SIT have concentrated on issues such as discrimination, bias, political affiliation, and departmental and organizational loyalty (see the reviews by Haslam, 2001, and Hogg & Vaughan, 2002). It is instructive that the identity lens can also be usefully applied to issues of governance, entrepreneurship, and their relationships.

Shortcomings and Further Research Directions

Our research is subject to a number of shortcomings. First, by focusing on external manifestations of EO we do not get directly at the conscious intentions of the owners and managers being studied. Our study illustrates an ultimate manifestation of an entrepreneurial process rather than the process itself. In that sense it does not do full justice to the EO concept, as characterized more richly by Lumpkin and Dess (1996), Wiklund and Shepherd (2005), and many other excellent studies. It is important also not to overgeneralize results from our large, publicly traded businesses: it is extremely likely that the governance drivers of EO will be quite different in smaller, private companies where agency issues are absent, and also in non-profit organizations.

In subsequent studies, researchers may wish to broaden their operationalizations of the EO concept and to examine a wider variety of more specific or fine-grained EO *processes*—becoming more precise about the different *kinds* of innovation, risk taking, and proactiveness, and tailoring operationalizations to particular industry or firm lifecycle challenges (Miller, 2011). Scholars also may wish to study different types of owners and their influence on EO—bankers, venture capitalists, hedge funds. As the drivers of EO remain relatively unexplored in large, publicly traded companies, it may be useful to examine environmental, structural, process, and personality influences in these settings. Consequences of EO beyond performance too may be examined—for example, acquisition and alliance formation behavior, internationalization, financial structure, and top management team stability.

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