BUILDING A THEORY OF INSTITUTIONAL LEARNING: AN ANALYSIS OF PHILANTHROPIC FOUNDATIONS

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Abstract

Despite tremendous advances in organizational theory, the focal actor in knowledge acquisition often remains at the organizational-level. Originating with Jim March’s (1991) study of organizational learning, concepts of exploration and exploitation have since become a widely-used lens for interpreting organizational behavior, typically classifying any new relationship as organizational exploration and the continuation of an existing relationship as organizational exploitation. In this paper I suggest that broadening our lens and conceptualizing institutional learning would enable consideration of the relative novelty of information that a new partner brings, not only to the dyadic relationship, but to the organizational fields within which they are embedded. To advance these aims, I develop a more robust theory of partner selection that defines institutional exploration as a relationship by any field member with a partner that is new to the field, while institutional exploitation involves a relationship that involves an alter that has pre-existing ties with at least one other field member. I test this theory with a novel longitudinal partner selection database from an organizational field with strong cultural expectations to consider benefits beyond the organizational-level – private endowed grantmaking foundations. I find that institutional exploration is an activity engaged in by organizations with greater internal ability to mitigate uncertainty and by those that exist in institutional environments that encourage innovative behavior. Though private foundations offer an extreme case of an organizational field encouraged to engage in institutional learning, the conceptual apparatus developed herein will hopefully be broadly applicable to collaborations, alliances, and networks that consider benefits beyond the firm.

Keywords: institutional learning, partner selection, exploration, exploitation, grantmaking foundations
“What is good for an organization is not always good for a larger social system of which it is a part.”
(March 1991, p. 73)

"Grand challenges" are complex global problems with far-reaching societal implications that lack a clear solution, but that can hopefully be addressed through coordinated and collaborative effort (George, et al., 2016). In short, they require that we broaden our perspective beyond any one individual organization or firm. To make progress on grand challenges, diverse communities must coalesce around an ambitious field goal, while ensuring that the table is open to new players with novel and innovative approaches (Grodal, and O’Mahony, 2017). Grantmaking foundations play a crucial role in efforts to seek solutions to grand challenges (Bartley, 2007), and their grantee selection decisions influence the structure and shape of civil society (Hammack, and Heydemann, 2009; Wiepking, and Handy, 2015). Amidst a myriad of possible grantees and great uncertainty, foundations select nonprofit organizations to which they make grants and decide how to structure those grants.

Grantmaking involves significant task-related uncertainty given the complexity and dynamism of the social issues that foundations work to address (Leat, 2006), and the inability to accurately predict and monitor the future performance of their grantees (Jensen, and Meckling, 1976). Moreover, addressing grand challenges is a global undertaking which requires supporting NGOs both within and outside the United States. As geographic, cultural, political, and linguistic differences increase, the uncertainty of the task-environment increases further (Kallman, 2017). Research has found that venture capitalists reduce the increased uncertainty of geographically distant partner selection through selecting start-ups with whom they have existing personal connections (Sorenson, and Stuart, 2001). This would suggest that foundations may similarly engage in a high degree of renewal funding, giving more grants to past grantees, especially in the context of international grantmaking. However, the independence of private foundation’s financial resources reduces the need for inter-foundation competition, and should therefore increase a foundation’s willingness to take risks (Quinn, Tompkins-Stange, and Meyerson, 2014). Moreover, the U.S. government’s regulatory apparatus guides foundations to act in charitable ways and
creates normative expectations that they will take the risks that visioning for an alternative future requires (Frumkin, 2006). In short, an alternative hypothesis would predict that in a context of task-related uncertainty, grantmaking foundations will think beyond their organizational risks and benefits, to truly grapple with social risks and benefits.

In order to resolve these competing predictions regarding organizational responses to uncertainty, I propose and then test a theory of learning that moves beyond the organizational-level to consider learning at the level of the organizational field, or what I call “institutional learning.” Jim March’s (1991) study of organizational learning, and the accompanying concepts of exploration and exploitation, have become a widely-used lens for interpreting organizational behavior (Gupta, Smith, and Shalley, 2006; Lavie, Stettner, and Tushman, 2010). Through this lens, organizational exploitation identifies situations where organizations leverage existing organizational knowledge and continue relationships with existing partners, thus enhancing efficiency through a reduction in variance and uncertainty, while organizational exploration describes attempts to introduce new information to the organization, often through engaging in search and the formation of relationships with new partners. When classifying organizational exploration, most studies utilize this simplified definition, indicating the absence of a prior tie, without differentiating the extant network location of the potential alter.

Relative novelty in processes of exploration is important, however. Increased proximal distance to knowledge is correlated with augmented novelty (Ahuja, 2000). As exploration moves farther away, both potential risk and opportunity increase, entailing a trade-off between the certainty of cooperation within cohesive networks and the novelty provided by networks rich in structural holes (Gargiulo, and Benassi, 2000). Moreover, potential organizational partners are embedded in institutional configurations that require a field-level analysis of attachment patterns (Barman, 2007). When an ego organization selects an alter that is not only new to them, but new to the field, it broadens rather than deepens the network. This consideration is particularly important in contexts that care about costs and benefits beyond the organizational-level, as the resultant decisions influence field formation through the creation of bridging versus bonding social capital (Putnam, 2000; Putnam, 2002). Analyzing the extant network
location of new partners allows a more holistic consideration of both influence and impact at the institutional-level. Ultimately, and increasingly, Western society is grappling with considerations beyond the firm-level in order to address grand challenges. We care not just about an idea, product, or partner generating profits for a particular organization, but the value it can add to a broader audience, to the field, or to society at large. Moreover, as organizational boundaries become increasingly fuzzy and markets occur across institutional spaces, it becomes crucial to envision innovation across previously discrete spheres. Conceptualizing novelty as a more nuanced function of socio-spatial distance between potential partners facilitates this analysis.

I test this theory with longitudinal data on the grantee selection patterns of U.S.-based grantmaking foundations. This setting provides an excellent test-site for considering institutional learning, as the decisions foundations make regarding grantee selection influence the structure and shape of civil society, either challenging or reproducing structural inequality (Beckfield, 2008). My empirical analysis maps a two-mode network of foundation-grantee ties over time. The analysis focuses on the grants that are classified as *organizational exploration*, heading to new NGOs with which the foundation has not had a previous relationship. Within this exploration, I investigate to what extent foundations are engaged in processes of *institutional exploration*, selecting NGOs that have not previously been funded by any other U.S.-based foundation, and to what extent they manage the uncertainty of grantmaking funding through a process of *institutional exploitation*, seeking new partners by replicating the past grantee selection choices of other U.S.-based foundations. Empirically, this illuminates when foundations are supporting a diverse variety of organizations across civil society, letting the proverbial thousand flowers bloom (Van Maanen, 1995; Zedong, [1957] 1986), and under what conditions international investment efforts are focused on continuing to support a few eye-catching organizations, instead creating a well-tended formal garden (Pfeffer, 1993). I extend existing theory on partner selection by providing a framework that differentiates between new partners based upon their relative socio-spatial distance with respect to the ego organization and the field within which it is embedded. Furthermore, I seek to shed new light on the connections
between partner selection patterns and the resulting network topology, with potential implications for understanding how social structures and processes of inequality are generated and altered.

**Building a Theory of Institutional Learning**

Exploration has traditionally been defined as the formation of a new relationship. Research that differentiates the relative novelty of new prospective partners, however, is limited. In an exception, Lavie and Rosenkopf (2006) examined variants of exploration, classifying “attribute exploration” as the partnering with a new organization whose features are considerably different from those of the ego organization’s past partners. Li and colleagues (2008) also highlight potential variation in the extent of a prior relationship with potential alliance partners, differentiating between friends, acquaintances, and strangers and operationalize these distinctions through a count of the number of previous alliances between partners. As innovation often originates with entrants, rather than incumbents (Foster, 1986), these differences matter. Notwithstanding these crucial exceptions, however, existing theory has been relatively agnostic with regard to the relative extant locations of the two organizations. I address this oversight by clarifying the alter organization’s location prior to tie formation with the ego organization.

I conceptualize the sources of knowledge about a potential partner as originating from concentric degrees of proximity, as illustrated in Figure 1. Delineating the spheres of familiarity is crucial, as it determines the relative gradations of socio-spatial distance for potential alter partners. For illustrative purposes, I delineate based upon organization and field boundaries. With this delineation, the resulting concentric areas of focus begin with the inner-most ring and include personal or organizational knowledge at the existing dyad-level, move to information or signaling from other inhabitants of one’s field in the next ring, and extra-network knowledge, within the largest ring. *Organizational exploitation*, in the inner-most ring, captures the renewal or continuation of a relationship between two previous partners. Outside of the organizational domain, all new relationships have traditionally been classified as organizational exploration.
This diagram, however, introduces an additional measure of socio-spatial distance, with organizational field boundaries.\(^1\) I define an organizational field as the differentiated, interdependent network of organizations and institutions that together reveal a recognized area of life (DiMaggio, and Powell, 1983). I assume that organizational field membership works similarly to other social identity-based group memberships (Tajfel, 2010): organizations may be perceived as belonging to a group that they do not identify with, they may perceive themselves as belonging to a group that they are not accepted within, and, most importantly, they can have multiple and overlapping field memberships (Hoffman, 1999). The behavior of organizations within fields is then believed to be guided by institutions, the cultural-cognitive, normative, and regulatory structures that provide a collective meaning for social behavior (Scott, 1995). I call learning at the organizational-field level, “institutional learning.” Here, the concept of *institutional exploitation* is utilized to represent situations where organizations form a tie with a partner that is new to them (thus, exploring at the organizational-level), but that has previously been selected or funded by other ego organizations within the field (thus, exploiting at the institutional level). The concept of *institutional exploration* is used to describe the process of an organization forming a tie with a partner that is both new to them and new to their organizational field. This definition of exploration embraces search and experimentation, pushing partner selection into the realm of innovation at the field-level.

There are many gradations along the continuum between institutional exploitation and institutional exploration. For example, a talent scout for a television series could expand their actor pool through a variety of means: a) accessing a database of all registered actors, b) reviewing the top 100 films and contacting the actors that fit their criteria, c) crowdsourcing with colleagues about past actors that

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\(^1\) Intermediate degrees within and outside of these clearly exist – small group knowledge, information from unknown sources, and multiple other concentric and overlapping rings from other fields. There are two crucial points of importance: 1) novelty and extant knowledge are conceived as relative phenomena, and 2) the delineation of boundaries is specific to the aims of any particular study.
they have worked with that would fit the part, or d) walking the streets of a major city and stopping individuals who look like they could play the part. With this framework, the first three processes of partner selection would be classified as institutional exploitation (the reliance on information or signals from within the organizational field). From a field-level perspective, institutional exploitation creates additional organizational ties within the network, rather than expanding the number of nodes within the network. Though it may not be through direct contact, these processes create the structural outcomes of homophily, as new-to-the-organization ties do not introduce new information at the field-level. On the other hand, institutional exploration, wherein the network expands through the introduction of additional nodes, brings new nodes and information into the field that did not exist previously. Table 1 provides an overview of the different logics of partner selection, the source of knowledge regarding the new partner, and the resulting field-level network patterns.

[Insert Table 1 here.]

As an ego organization prepares to embark upon an investment with a new alter organization, they are inherently involved in a situation of uncertainty. Initiating a romantic relationship, hiring a new employee, embarking on a joint venture, or making an investment decision – choosing a partner is almost invariably characterized by both opportunity and uncertainty. This paper seeks to better understand, when organizations are seeking a new partner, what influences their use of institutional exploitation versus institutional exploration? In order to develop a theory on partner selection and add nuance to the exploitation/exploration framework, I draw on institutional theory and work on uncertainty. I utilize these older arguments in the service of new conceptual ideas, which I test with unique data. I now present several hypotheses that predict when organizations would engage in each kind of organizational exploration.
H1: Organizational Ability to Mitigate Uncertainty

Market-level uncertainty renders partner quality difficult to assess (Podolny, 1994). This uncertainty results from incomplete knowledge, and a fundamental human-desire to reduce uncertainty (Hogg, and Mullin, 1999). On an organizational-level, DiMaggio and Powell (1983) posited that under conditions of uncertainty organizational decision makers mimic the behavior of other organizations in their environment in order to maintain legitimacy. Absent both information and a personal relationship, but the desire to invest or work in an unfamiliar locale, organizations may utilize signals based upon their potential partner’s past or current relationships with others within their network, resulting in patterns of homophily (Podolny, 2005). For example, venture capitalists repeatedly finance investments that they learn about through referrals from close contacts, including peer venture capitalists, extra-industry family members and friends, and previous investment recipients, as well as selecting new ventures that are highly localized with respect to industry space (Gupta, and Sapienza, 1992; Norton, and Tenenbaum, 1993; Fried, and Hisrich, 1994).

Both networks research and social psychology teach us that people rely upon contacts in their community for trustworthy and reliable information within a connected community (Friedkin, 1998). Organizations rely on information from the network of prior alliances to determine with whom to cooperate (Gulati, 1995; Gulati, 1999; Gulati, and Gargiulo, 1999). These new alliances modify the existing network, prompting an endogenous dynamic between organizational action and the topology of fields. As a grantmaker working in China noted, “You have to get it vetted by someone… to see who knows these people, who else has funded them. And if someone else says, ‘Oh, yeah, I know him. He used to be at such-and-such organization’, then it’s easier” (Spires, 2011: 320). Additionally, Galaskiewicz and Burt’s (1991) evaluation of the partner selection patterns of corporate foundation program officers found strong evidence of the replication of another program officer’s previous selection choices. They found that program officers used signals of others’ decisions to influence their own. Hence, under conditions of market-level uncertainty, organizational exploration in investment partner selection will rely upon institutional exploitation.
Beckman and her colleagues (2004) provide a useful differentiation between market- and firm-level uncertainties, suggesting that while market-level uncertainty will lead to exploitation, firm-level uncertainty will lead to exploration, as organizations establish linkages that seek new information in an attempt to reduce or manage their uncertainty. Their argument, however, presumes that the new relationship is a mutual partnership or otherwise short-term engagement that provides additional information to combat the uncertainty, but does not entail further risk for the organization. When the partner selection process is itself the desired outcome and the source of uncertainty, as in the formation of many investment relationships, I predict that firm-level uncertainty will not lead to institutional exploration. Rather, under conditions of firm-level uncertainty, organizational exploration in partner selection will rely upon the knowledge of others in the field, resulting in patterns of institutional exploitation. To the extent that firms are able and willing to reduce firm-level uncertainty through endogenous means, they are predicted to engage in more institutional exploration. Here I outline three ways in which organizations may utilize their own resources, experience, and grant design to mitigate uncertainty, potentially leading to greater propensity for institutional exploration.

**Resources.** An organization’s financial resources influence its ability to garner more knowledge and mitigate uncertainty. In a for-profit funding setting, research has demonstrated that larger venture capitalists exhibit less bias towards a geographically proximate partner (Cumming, and Dai, 2010). In other words, when faced with decisions that involved varying degrees of uncertainty based upon geographic proximity, organizations that had less resources were more likely to select the closer, more certain choice, as compared to their more well-resourced colleagues. Similarly, I expect that foundations with more limited resources will be more likely to use heuristics in their search for new partners with high output quality and rely on easier to acquire factors such as legitimacy and prestige (Podolny, 2005), which can be garnered through institutional exploitation, as opposed to more thorough and objective, but also more expensive, search processes that are often necessary for institutional exploration. In the international philanthropic context, organizational resources could enable the maintenance of a local field office or
funding significant international travel for program officers that help vet local partners and monitor grants, both features that would be more likely to lead to new field partners. Hence, I hypothesize that:

Hypothesis 1a (H1a): Increased *foundation resources* will be positively associated with institutional exploration.

*Experience.* The experience of a foundation describes behaviors that have accrued domain-specific knowledge that enables the organization to mitigate uncertainty. For example, Gronbjerg et al. (2000) found that high rates of renewal grants reduce the time and efforts that both parties need to invest, enabling funders to use familiarity and trust as a stand-in for more objective determinations of quality, similar to Sorenson and Stuart’s (2001) findings in the for-profit realm that inter-firm relationships in the venture capital community reduce spatial limitations on the flow of information and increase the probability of future partnership. Similarly, I would expect that organizations that have a history of working overseas develop a familiarity, expertise, and cultural understanding that increase their comfort in that environment, as they are better able to differentiate between real and perceived risks. Hence, I hypothesize that,

Hypothesis 1b (H1b): Increased *foundation experience* will be positively associated with institutional exploration.

*Investment.* Studies of personal relationships show that when trust is greater, people invest more in the relationship (Rusbult, Martz, and Agnew 1998). In support of this broader claim, research on venture capitalists shows that the size of investments increases with geographic proximity (Sorenson and Stuart 2001; Cumming and Dai 2010), and foundations give more money to nonprofits that are connected via extra-organizational, interpersonal networks (Galaskiewicz, and Wasserman, 1989). Hence, I hypothesize that,
Hypothesis 1c (H1c): Decreased *foundation investment* will be positively associated with institutional exploration.

**H2: Organizational Perceptions of Uncertainty**

Foundations experience an inherent tension as they are called upon to sustain existing programs and initiatives, through processes of institutional exploitation, but also asked to promote social innovation and progressive social reform, through processes of institutional exploration (Suárez, 2012; Mosley, and Galaskiewicz, 2015). As a result, it is challenging to identify which organizational characteristics predict more radical choices within philanthropic decision making. Most organizations exist within institutional environments that hold prevailing social rules, norms, and values that limit the range of options that are perceived as legitimate (Scott, 2003). Organizations within a particular institutional environment are subject to the same expectations and constraints, and therefore they are also assumed to become isomorphic in their behavior over time (DiMaggio and Powell 1983). Within many industries, entrepreneurship and risk is expected from leading firms, and innovation necessitates exploration (Greve, 2007). Similarly, these normative standards can expect entrepreneurial innovation, forging a new path for the field (Bartley, 2007). Below, I detail two forms of variance in whether local norms reward conformity or novelty – imprinting from the prevalent social norms at the time of foundation founding and influence from the current social norms within the more localized organizational field.

*Imprinting*. Stinchcombe (1965) identified that environmental influences during the founding period imprinted upon organizations and resulted in a cohort-effect of similarity, even as they moved forward in history. With this expectation, I would anticipate that foundations that were initiated during periods of entrepreneurial spirit would be less risk averse, and more willing to explore institutionally in search of new partners, while their colleagues who began foundations during periods of less experimentation and innovation would be less likely to explore institutionally. Hence, I hypothesize that,
Hypothesis 2a (H2a): Foundations founded in an era of entrepreneurial innovation will be positively associated with institutional exploration.

*Foundation Type.* While all grantmaking foundations exist within an organizational field, governed by the same regulatory and task environment, there are more localized organizational fields that also offer more localized norms and expectations for organizations. Within the realm of philanthropy, there are independent foundations, initiated with family funds, which respond to different stakeholders than their array of cousins – corporate foundations, community foundations, and operating foundations. All of these organizations engage in the same task environment – making grants to support causes – but they each serve unique constituencies that place them outside the professionalized foundation field and in more specialized local environments with varied norms and expectations to further their familial, community, or corporate interests (Gronbjerg, Martell, and Paarlberg, 2000). Hence, I hypothesize that,

Hypothesis 2b (H2b): Foundations in specialized organizational sub-fields will be positively associated with institutional exploration.

**DATA AND METHODS**

This paper is guided by the following research question: When engaging in organizational exploration, under what conditions do organizations utilize institutional exploration and select a new entrant to the field and under what conditions do they utilize institutional exploitation and select a repeat player? Institutional exploration in partner selection is examined through an empirical analysis of international grantmaking by U.S.-based foundations over the period 2000 to 2012. Data was obtained from The Foundation Center grants database, a repository containing records on the majority of grants from U.S. foundations over $10,000 in size. Our dataset represents a subset of the entire Foundation Center database covering all U.S. foundation grants categorized as “international” from the period 2000 to 2012. This data includes private foundations and re-granting public charities. Grant recipients are non-
governmental organizations (NGOs) including U.S.-based nonprofits that are doing work in international development, human rights, public health, etc., and foreign NGOs that receive grants from U.S. foundations. The dataset consists of 161,688 unique grants from 1,681 foundations given to 32,134 different NGOs, resulting in 63,067 unique dyadic ties between a foundation and an NGO. The median grant size is $50,000, and collectively, international grants by U.S. foundations total $53.4 billion dollars in this period.

The data I obtained from the Foundation Center included limited information about foundation and NGO characteristics. To extend the analysis I identified EINs for all foundations in the database and added organizational characteristics using data from the National Center for Charitable Statistics Core Trend panel of IRS 990 data, including attributes such as assets, revenues, and program spending. Over half of the NGOs in the dataset are incorporated outside of the US, however, so I could not similarly add NGO characteristics using U.S. tax data. As a result, information about the NGOs is limited to the location of their headquarters. This represents a limitation of any study this large that is studying foreign NGOs and is one of the reasons my analysis favors foundation characteristics over NGO characteristics.

**Dependent Variable: Institutional Exploration**

This paper aims to examine the relative field-level novelty of partners that are new to an organization resulting from instances of organizational exploration. For the purposes of this study, I differentiate and analyze institutional exploitation, the process of forming new personal ties through the replication of others’ past tie selection patterns, and institutional exploration, the process of forming new personal ties with alter organizations that were not previously connected to other organizations in the field.

The simplest measure of institutional exploration is the inverse of organizational exploration via institutional exploitation. In other words, if an organization chooses a new partner (practices organizational exploration), there are two choices for the extant location of that new partner relative to the field boundaries: either the alter organization has been previously funded by another field member,
resulting in coding it as institutional exploitation, or it has not been previously funded by another field member, resulting in coding it as institutional exploration. All new grants were coded as these mutually disjoint categories. I make the assumption that institutional memory is strong—a new grant given to an NGO many years after its most recently received grant is still a form of institutional exploitation. Therefore, if an NGO has received a grant in any previous year, a new grant to them was considered as institutional exploitation. In the case when multiple institutional exploration grants were given to the same NGO in the same year, all grants made in that year were considered as institutional exploration. Visual and tabular explanations of this conceptualization were presented in Figure 1 and Table 1. There are 70,894 new grants in the dataset, 41,020 (58%) of which were coded as institutional exploration, and 29,874 (42%) were coded as exploitation.

As mentioned previously, there still exists considerable variation among these two codes. For future analyses, I hope to expand the understanding of exploration and exploitation. For instance, a foundation’s institutionally explorative behavior can be further classified based upon whether there are multiple foundations investing in the NGO during its first year in the dataset, and based upon what happens to the NGO after the institutionally exploratory ego foundation introduces them to the field. To clarify, I could further differentiate institutional exploration into three possibilities: a) co-investment, wherein a foundation forms a tie with a new NGO partner contemporaneously alongside one or more other ego foundations, thus sharing the risk of the new investment, b) trendsetting, wherein a single foundation forms a tie with a new NGO partner that subsequently forms ties with other ego foundations, and c) sole support, wherein a single foundation forms a tie with a new NGO partner and remains the only foundation providing support to that NGO over the period of study. I could perform a similar breakdown of institutional exploitation. For instance, exploitation could be further differentiated as a) bandwagon, wherein a foundation forms a tie with an NGO in a smaller amount and for a shorter period of time than other current funders, a fairly risk-free investment, and b) lead investor, wherein a foundation forms a tie

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2 Assuming any limits of institutional memory attenuates the results reported, providing an empirical basis for this assumption.
with an NGO and quickly, if not immediately, becomes the NGOs largest investor in terms of grant size and/or relationship length, gaining a certain sense of shared fate for that NGO’s success.

As illustrated in the example above regarding the talent scout, there are also many shades of institutional exploitation based upon the relative distance of the new organization from the ego organization. Arguably, it is more novel for the Miliano Brothers Foundation to grant to a new organization that they saw mentioned in a newsletter from a distantly-related funder, than it is for them to start funding the long-time grantee of their closely aligned sister foundation, the Miliano Youth Foundation. For the sake of this initial test, however, a binary, mutually exclusive distinction is made. If the NGO grantee organization was extant in the field (ie. if it had previously been funded by another U.S.-based foundation within the data set), then the tie was coded as institutional exploitation.

An immediate limitation that I take into account is that the size of the dataset is directly related to this coding scheme. For example, in the first year of the dataset, all grants given are coded as institutional exploration because there is no data for grants prior to the year 2000. In general, there is a concern that there will be an overemphasis on institutional exploration in the earlier years. To address this issue, I do not include grants that were given before 2005 in the statistical models, but still use these grants to confirm or disconfirm an NGO’s existence in the institutional field. I chose this as the threshold year based on empirical analyses (see Figure 2) of when patterns of exploration and exploitation stabilize—change in their respective percentages from year to year become insignificant. For sensitivity analysis, I run the models while varying the threshold year and find no difference in results in the three years before or after 2005. Additionally, as can be seen in Figure 2, firm-level exploitation steadily increases from 2000-2012. It is impossible to distinguish whether this is due to the limited nature of the dataset or if it is indicative of a substantive trend. Thus, I control for grant year in my models but am limited in my interpretation of its result as being artifactual or indicative of an institutional pattern.

[Insert Figure 2 here.]
Another similar potential skew in the data comes from the coding of grants given in the first years of new foundation’s lives that were born as the result of mergers, re-incorporations, or splits. I am in the process of adding this historical data to the dataset, but for this analysis, I use a heuristic to ensure that grants that may be naïvely coded as organizational exploration are not included in the model. For every foundation that gives an average of at least three international grants each year, I do not include grants made in its first two years of incorporation in the model. Changing the average number of grants, or the number of years since incorporation (including zero) does not change the results of the model. I use an average grant threshold to ensure grants from foundations that do not regularly provide international grants are still included. This allows me to assess the impact of uncertainty on the decisions of these part-time players. The choice of two years since incorporation was chosen as the empirical point where the foundation’s ratios of exploration and exploitation grants does not change significantly from year-to-year, this organization-level baseline is smaller from the full dataset baseline because it takes longer to establish confidence that all institutional players are included compared to all organizational ones.

Independent Variables

**H1: Organizational Ability to Mitigate Uncertainty.**

*Organizational Resources.* I operationalize organizational resources as the total assets of the foundation the year a new grant is awarded. Assets has been logged and then normalized to account for skew from large outliers and the fact that larger organizations give more grants. I include a quadratic term to allow for non-linear differences in foundation behavior across small, medium, and large foundations. In my model, the median foundation has total assets of $264 million, while the largest foundation (The Gates Foundation) has assets of $38 billion in 2012.

*Organizational Experience.* I operationalize program experience and region experience separately as the foundation’s number of grants within a region or program area in the three years prior to the current grant year. These variables are proxies for the learning that occurs through experience within a program or region area, which leads to familiarity with issues, conditions, and actors. I assume that
program experience builds knowledge about implementation across multiple geographic contexts and regional experience builds familiarity with local contexts. These experience variables are logged to account for significant skew that occurs because of the large variance in foundation size. The median count across all foundations in the model is 58 for regional experience and 45 for program experience. As a third measure of organizational experience, I measure *international grantmaking experience* with how much a foundation prioritizes international work by analyzing the amount grant dollars given to international NGOs as a proportion of all expenses by the foundation in the year the grant was awarded. The average foundation in the dataset gives 21% of their grants in a given year to international work.

*Organizational Investment.* Organizational investment is operationalized by the log of the dollar amount of the grant. The log corrects for the rightward skew of the distribution. When foundations experience greater uncertainty and risk, I expect that they will respond more tentatively and with greater caution. This is both a functional response to risk, and a normative one to avoid visible failure. Thus, by investing less under uncertainty, an organization mitigates potential negative effects. Grant sizes range from $10,000 to nearly $1 billion, with a median of $50,000. The variable of grant size is considered at the same time the foundation makes the decision to partner with the NGO. As a result, it should be considered as a contemporaneous feature of the partner decision, and not interpreted as causal antecedent of partner selection—it is an organizational response to uncertainty. The fact that it is jointly determined, however, allows me to test the hypothesis that contracting mechanisms will be used to address uncertainty associated with organizational exploration grants. A significant coefficient on grant size offers evidence that when institutional exploration grants are made, foundations specify terms to appropriately account for the uncertainty inherent in the relationship.

**H2: Organizational Perceptions of Uncertainty**

*Imprinting.* I operationalize imprinting with the age of the foundation the year the grant was awarded. I normalize age and add a square term to assess a curvilinear relationship that may be more in

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3 In the final model I operationalize region and program experience as the count of prior grants, but we also ran models using the total dollar amount and results are almost identical.
line with the imprinting hypothesis or tell a more nuanced description of foundation maturation. Age ranges from 1 to 107, with an average age of about 40 years old.

**Foundation Type.** This legal definition captures a foundation’s relevant institutional environments. Four different types of foundations have been coded: 1) independent/professional, 2) corporate, 3) operating, and 4) community. An independent foundation is what the public has come to expect when they think of a foundation—the Fords, the Carnegies, and the Hewletts of the grantmaking world—professionally run, financially self-sufficient, and oriented towards grantmaking (Frumkin, 1999). The other foundation types are compared against this category as the base. Corporate foundations serve a unique constituency, in often providing for the corporate social responsibility work of their main funder (Burlingame, and Young, 1996). These foundations often face similar demands to a corporate environment, that is, consumer preferences and shareholder concerns. Community foundations are often focused geographically on their local community, and therefore do not generally participate substantially in overseas grantmaking. However, Community Foundations also hold individual donor accounts (donor-advised funds) and often give grants based on the whims of the holders of these accounts. Finally, operating foundations generally initiate and maintain their own projects and programs, much like an endowed nonprofit organization, and rarely do grantmaking, hence the fact they only constitute four percent of the sample. 63 percent of foundations that gave international grants from 2000 to 2012 were independent foundations, while the rest were corporate foundations, 21 percent, community foundations, 12 percent, and operating foundations, 3 percent.

**Controls and Fixed Effects**

**Grant Year:** As mentioned previously, I control for grant year to help ensure that results are not skewed by the nature of the dataset and the limited grant history I have available. Because it is impossible to distinguish between the aforementioned artifactual results and those that may be more substantive due to grantmaking trends, there are limitations to how this variable may be interpreted. Foundations are only
legally required to report their grantmaking by fiscal year, so this is the most refined temporal variable available for foundation grantmaking data.

**Grant Duration:** Grant duration, or the length of time over which the NGO is intended to spend the funds from a foundation’s grant, is documented directly by the Foundation Center. I have rounded this number up to the next year to align with the other variables measured on a yearly basis. It is necessary to control alongside grant size as larger grants with longer grant durations are not readily comparable to grants with shorter grant duration. Grant durations range from one to 25 years, with a mean of 1.18 years.

**Foreign NGO Support:** This is operationalized as the proportion of grant dollars a foundation makes in the given grant year to NGOs based outside of the United States. U.S. tax law requires foundations to take an extra step of legal documentation when giving to NGOs based outside of the U.S. There are many more foreign NGOs than international NGOs that are based in the U.S. Controlling for the proportion of foreign NGO grant dollars ensures that I do not misinterpret results that may be a result of a probabilistic process. Foreign NGOs make up 61 percent of the grant recipients, but only 36 percent of the grants coming from 42 percent of the foundations, reflecting their higher prevalence but greater operational difficulty when a foundation makes a grant.

**Program Fixed Effects:** Each grant is coded as supporting a specific program area collapsed into six categories in line with U.S. tax categories: arts and culture; education; environment and animals; health and human services; international development and human rights; and public affairs/society benefit. There were a small number of grants (n = 45) I was unable to categorize. I use program fixed effects ensuring that the results I find are not due to issue-specific phenomena that may influence uncertainty.

**Region Fixed Effects:** Each grant’s intended location is coded as being targeted to global causes, Asia, Africa, Latin America, or the Middle East. Each region includes low- and middle-income countries that are typically net aid recipients. For this reason, Korea and Japan are excluded from Asia. The proportion of grants targeted to regions are 34 percent to global projects, 15 percent in Asia, 13 percent in Africa, 13 percent in Latin America, and 9 percent in the Middle East. The other grants were either
impossible to determine or given to donor countries for reasons it was difficult to ascertain in any useful manner and were thus not included in the fixed effects. Using region as a fixed effect makes it clear that I do not pull erroneous results that may be the explained by local norms or events in specific regions; this is especially important as I assess the impact of region experience as a foundation’s way of reducing uncertainty.

Descriptive statistics of all variables are presented in Table 2.

[Insert Table 2]

Models and Analysis

I analyze grant partner selection at the grant level using an OLS, linear probability model with robust standard errors. This model is preferred to logistic regression as it tends to produce similar estimates, but interpretation is much simpler since coefficients directly represent changes in probabilities, whereas logistic models require link functions.\(^4\)

We analyze the following model:

\[
y_{ti} = b_0 + \sum \beta_1 x_{ti} + \sum \beta_2 (u_t \ast v_j) + (\mu + \delta) x_{ti} + \epsilon_{ti}
\]

Where \(y_{tij}\) is a binary variable at the grant-level that takes the value of one when a grant is an instance of institutional exploration and zero when a grant is an instance of institutional exploitation, where \(t\) is the time the grant was made, \(i\) is the recipient NGO, and \(j\) is the grant-making foundation. \(\beta_1\) and \(\beta_2\) are the linear coefficients of interest. \(x_{tij}\) represents the set of grant-level characteristics (ex. size, duration, region, program, etc.) of the grant in time \(t\), to NGO \(i\), from foundation \(j\). \(U_t \ast V_j\) are the set of foundation-level characteristics, \(V_j\), in the year the grant was given, \(U_t\) (ex. total assets, age, experience,

\(^4\) For the sake of sensitivity analysis, logistic models were run and produced coefficients that matched the linear probability model in size, sign, and significance.
etc.). $U_t$ should here be understood as a categorical variable of year and not a numerical one. Finally, $(\mu + \delta)X_{tij}$ are the program, $\mu$, and region, $\delta$, fixed effects applied to the relevant grant characteristics, $X_{tij}$.

**RESULTS**

Does the uncertainty of the international grantmaking market lead to massive institutional exploitation by foundations? Table 3 shows that there is nothing massive occurring. Institutional exploration and exploitation are evenly split. Foundations appear to not avoid institutional exploration, but rather engage in a balance, as a portfolio manager may balance their investment risks. Foundations do not seem to avoid uncertainty, but also do not especially seek it out. Those foundations that do engage in the exploratory behavior as measured by these centrality measures, tend to be larger, older, and more experienced. When they do engage in institutional exploration, they give smaller grant sizes, but these grants have similar if not higher duration. Overall, foundations do not seem to be a shying away from field exploration, but rather it is a regular act; institutional learning appears to happen at a regular, steady pace. The successive models were built to test the hypotheses previously presented to understand what factors are associated with this institutional exploratory behavior.

[Insert Tables 3 and Table 4 here.]

Table 4 presents results testing hypotheses 1a, 1b, and 1c regarding the role of an organization’s ability to mitigating uncertainty. Models 1 and 3 reveal a more complicated picture than hypothesis 1a predicted—that increased foundation resources will be positively associated with institutional exploration. As hypothesized, the greatest propensity to institutionally explore is related to the greatest organizational resources, but the relationship is parabolic, and so there is also a higher propensity to explore as assets get quite small (below $2.5$ million in total assets). Figure 3 graphs this relationship. The
highest rate of institutional exploration are the foundations with the greatest assets, but the lowest rates of exploration are among foundations that have low, but not the lowest, assets.

[Insert Figure 3 here.]

*Note: The data pictured is limited to the middle 95% of values to eliminate outliers and improve readability (2.5% to 97.5% of assets).*

Table 4 shows unqualified support for hypothesis 1b, which predicts that increased *foundation experience* will be positively associated with institutional exploration. I find experienced grantmaking to a particular programmatic area, to a particular region, and broader experience with international grantmaking are all positive and significant in model 1, and all remain positive and significant with p < 0.05 in the full model, although the effects are slightly attenuated with the controls added.

Table 4 also shows unqualified support for hypothesis 1c, which predicts that increased *foundation investment* will be negatively associated with institutional exploration. This effect is also attenuated with the added controls but remains significant with p < 0.001 in the full model. Overall, I find strong support for hypothesis 1—organizational ability to mitigate uncertainty, with added nuance regarding hypothesis 1a—the ability of organizational resources to mitigate uncertainty.

Table 4 presents results testing hypotheses 2a and 2b, regarding the role of norms and subjective perceptions of uncertainty. Models 2 and 3 show partial support for hypothesis 2a, which predicts that foundations founded in an era of entrepreneurial innovation will be positively associated with institutional exploration. The results show a negative curvilinear relationship between age and a propensity to engage in partner selection via institutional exploration. Older and younger organizations are less likely to explore than organizations in “middle-age.” Moreover, as Figure 4 shows, there are nuanced findings with two clusters of foundations that are most likely to explore, those founded approximately 30 years ago and those founded around 70 years ago. These data suggest an imprinting of norms from the 1990s and the 1950s.
Table 4 neither supports nor rejects hypothesis 2b, which predicts that foundations that exist in specialized organizational sub-fields will be positively associated with institutional exploration. The addition of the control variables in the full model significantly change the results seen in model 2. This finding shows that there is more diversity within than between these different broad foundation types.

**DISCUSSION, LIMITATIONS, AND FUTURE WORK**

When engaging in organizational exploration, under what conditions do organizations utilize institutional exploration and select a new entrant to the field and under what conditions do they utilize institutional exploitation and select a repeat player? I find that greater organizational resources and experience are significantly related to institutional exploration, and foundations try to mitigate the inherent uncertainty in these relationships with smaller grant amounts. These findings were made more complex as I found institutional exploration has a nuanced relationship with foundation age and foundation type, neither of which show a clear linear or categorical relationship with exploration.

The nuances observed are important to address as I seek to understand how organizations operate in these uncertain environments and expand the field. Greater organizational resources help to reduce uncertainty, but the findings also suggest that very small amounts of organizational resources can also be associated with activity in uncertain environments. While greater organizational resources seem to have the hypothesized effects of mitigating risk, organizations with the fewest resources may take a “nothing to lose” attitude towards uncertainty. This would support past research on lower status actors, which finds that they are liberated to defy accepted practice because, regardless of their actions, they exist outside of the group (Hollander, 1961; Phillips, and Zuckerman, 2001). Alternatively, there is evidence that both large and small foundations engage in the most innovative behavior (Suárez, 2012; Mosley, and Galaskiewicz, 2015). In the international case, where issues of uncertainty are exacerbated, I see some
evidence that the smallest organizations are still engaging in institutional exploration. It is possible that significant resources reduce uncertainty, while the significant lack of resources reduce the risks associated with uncertainty.

This finding was accompanied by the unequivocal relationship between experience and institutional exploration. This strongly suggests that organizational experience enables the acquisition of knowledge which can mitigate uncertainty and facilitate more institutional exploration. Whether experience actually reduces uncertainty, or boosts confidence and reduces the perception of uncertainty, multiple measures of experience have independent effects associated with institutional exploration. Further research could understand the qualitative differences across these forms of experience and explore additional measures of experience (e.g. operational, procedural, professional, etc.) that can also impact how organizations approach expanding the institutional field.

Even with organizations’ use of resources and experience to engage in institutional exploration, they also work to mitigate uncertainty through their actions, as evidenced by grant size and hypothesis 1c. When in an uncertain environment, organizations are reluctant to make big bets on the opportunities that present the greatest risks. This could be seen as a rational response to risk, but it also opposes the messages that foundations and investors champion of embracing risk and taking chances on new, entrepreneurial ideas and projects. No matter the resources or expertise at hand, organizations still appear reluctant to take significant risk when the opportunities are presented. Together, the results from hypothesis 1 describe how institutional exploration is approached within an organization and how different factors mitigate the risks and uncertainty inherent in exploratory behavior. Institutional learning is approached tentatively by organizations with greater resources and experience.

Complementing these internal considerations, I also find that normative factors play a role in the perceptions and approaches to institutional exploration. An imprinting hypothesis would lead to the conclusion that foundations rising out of entrepreneurial periods would be attracted by uncertainty and riskier ventures. However, I find that many young foundations founded in the recent entrepreneurial
period seem to avoid uncertainty the most. Analyzing the periods that do feature the most institutional exploration, entrepreneurial imprinting could be a possible explanation, but the 1950s and the 1990s were also the longest prolonged periods of American economic prosperity and confidence. Foundations founded in these periods could have been imprinted with a buoyed confidence and optimism that may reduce the observed uncertainty in institutional exploration. Institutional exploration may be more related to optimism and confidence, whether real or perceived, than attitudes and ideologies regarding risk and entrepreneurialism.

Hypothesis 2 also suggested that a more niche relevant environment would lead to greater exploration, but the findings showed that there was great variation within the coded foundation types. This variation likely means that each of these foundation types need more clarity and conceptualization. While this hypothesis was designed to test the variation within the broader organizational field of grantmaking foundations, there are likely still multiple normative environments within each foundation type explored here. While there are many possible institutional explanations for these findings, above all, any possible explanation reveals the number of questions that are unanswered by the literature regarding the institutional fields that different foundations belong to. Future research should seek to identify the different niche fields they operate in and how their decisions are structured by their institutional imperatives.

The current examination of this proposed theory analyzes a context of a single initial investment, not a mutual or ongoing partnership. I assess how organizations approach a new investment opportunity, but do not assess the quality or character of the relationship. It is possible that an initial investment is simply a symbolic act and does not extend beyond a performative decision-making process or a process that involves any search at all; an implicit assumption is that these initial investments are made with the intention of learning something from the relationship.

---

5 This effect could be a result of the significant impact of experience on a propensity towards institutional exploration, as supported by hypothesis 1b. Although I control for three varieties of experience in model 3, the strong findings of these three variables imply that other unobserved forms of experience may also be at play. In this way, hypothesis 2a's results could be interpreted as support for both hypothesis 1b and 2a.
This study examined investment relationships that entail an asymmetry in power between partners, such as those between employer-employee contracts, corporate-financial interlocks, venture capital investments, and agency-sponsor linkages. Conversely, the majority of research on the transfer of information within a field has focused on mutual partnerships between peers of similar power, status, and standing in the relationship (Powell, Koput, and Smith-Doerr, 1996; Stuart, 1998; Ahuja, 2000), such as strategic alliances, trade associations, informal coalitions, voluntary agency federations, and joint ventures. Future work can and should examine how reducing the power differential between ego and alter influence the nature of institutional exploration.

In summary, organizational approaches to institutional learning are impacted both by intra-organizational factors and external, institutional ones. Organizations themselves experience a reduction in perceived uncertainty and an increase in exploratory behavior when their resources and experience increase, or by actively taking calculated risks. However, these organizations are also impacted by their institutional environment, both at the time when they are founded and the current institutional fields they interact within. The institutional environment dictates the norms surrounding uncertainty and forms an external pressure on organizations that alters these organization’s perceptions and decisions about whether to explore or exploit within an uncertain environment. This impacts when and how institutional learning occurs and therefore the introduction of innovation and ensuing structuration of the organizational field. As we increasingly differentiate among forms of exploitation and exploration, we can begin to not simply analyze organizational behavior, but additionally, the structure, growth, and maturation of entire fields.
References

Ahuja, G.

Barman, E.

Bartley, T.

Beckfield, J.

Beckman, C. M., P. R. Haunschild, and D. J. Phillips

Burlingame, D., and D. R. Young

Cumming, D., and N. Dai

DiMaggio, P. J., and W. W. Powell

Foster, R. N.

Fried, V. H., and R. D. Hisrich

Friedkin, N. E.

Frumkin, P.

Frumkin, P.

Galaskiewicz, J., and R. S. Burt

Galaskiewicz, J., and S. Wasserman

Gargiulo, M., and M. Benassi

George, G., J. Howard-Grenville, A. Joshi, and L. Tihanyi

Greve, H. R.

Grodal, S., and S. O’Mahony

Gronbjerg, K. A., L. Martell, and L. Paarlberg

Gulati, R.

Gulati, R.

Gulati, R., and M. Gargiulo

Gupta, A. K., and H. J. Sapienza

Gupta, A. K., K. G. Smith, and C. E. Shalley

Hammack, D. C., and S. Heydemann
Hoffman, A. J.  

Hogg, M. A., and B. A. Mullin  

Hollander, E. P.  

Jensen, M. C., and W. H. Meckling  

Kallman, M. E.  

Lavie, D., and L. Rosenkopf  

Lavie, D., U. Stettner, and M. L. Tushman  

Leat, D.  
2006 "Information for a messy world: Making sense of pre-grant inquiry." Third Sector Review.

Li, D., L. Eden, M. A. Hitt, and R. D. Ireland  

March, J. G.  

Mosley, J. E., and J. Galaskiewicz  

Norton, E., and B. H. Tenenbaum  
1993 "Specialization versus diversification as a venture capital investment strategy." Journal of Business Venturing, 8: 431-442.

Pfeffer, J.  
Phillips, D. J., and E. W. Zuckerman

Podolny, J. M.

Podolny, J. M.

Powell, W. W., K. W. Koput, and L. Smith-Doerr

Putnam, R. D.

Putnam, R. D.

Quinn, R., M. Tompkins-Stange, and D. Meyerson

Scott, W. R.

Scott, W. R.

Sorenson, O., and T. E. Stuart

Spires, A. J.

Stuart, T. E.

Suárez, D. F.

Tajfel, H.
2010 Social identity and intergroup relations: Cambridge University Press.

Van Maanen, J.

Wasserman, S.
1994 Social network analysis: Methods and applications: Cambridge university press.

Wiepking, P., and F. Handy
2015 The Palgrave handbook of global philanthropy: Springer.

Zedong, M.
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<thead>
<tr>
<th><strong>Table 1. Dimensions of Ego Organization Partner Selection Logic</strong></th>
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<tbody>
<tr>
<td><strong>Definition</strong></td>
</tr>
<tr>
<td>Reproduction or renewal of existing organizational relationships.</td>
</tr>
<tr>
<td><strong>Organizational-level novelty</strong></td>
</tr>
<tr>
<td><strong>Field-level novelty</strong></td>
</tr>
<tr>
<td><strong>Primary Source of Knowledge Regarding Alter Organization</strong></td>
</tr>
<tr>
<td><strong>Impact of Partner Selection Logic on Network Topology</strong></td>
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Table 2. Descriptive Statistics

<table>
<thead>
<tr>
<th>Statistic</th>
<th>N</th>
<th>Min</th>
<th>Median</th>
<th>Mean</th>
<th>Max</th>
<th>St.Dev.</th>
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<td>$1</td>
<td>$264 million</td>
<td>$3.12 billion</td>
<td>$38.84 billion</td>
<td>$7.82 billion</td>
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<td>45</td>
<td>169.35</td>
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<td>58</td>
<td>180.50</td>
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<td>0.28</td>
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<td>41.02</td>
<td>107</td>
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<td>0</td>
<td>0.21</td>
<td>1</td>
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<td>0</td>
<td>0.12</td>
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<td>0.33</td>
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<td>Foundation Type: Operating Foundation</td>
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<td>0</td>
<td>0.04</td>
<td>1</td>
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<tr>
<td>Grant Year</td>
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<td>2005</td>
<td>2009</td>
<td>2008.61</td>
<td>2012</td>
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<td>0.59</td>
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<tr>
<td>Foreign NGO Support</td>
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<td>0.31</td>
<td>0.37</td>
<td>1.00</td>
<td>0.33</td>
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Table 3. Institutional Exploitation and Institutional Exploitation Descriptive Statistics

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Institutional Exploitation</th>
<th>Institutional Exploration</th>
<th>Centrality Measure</th>
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<tbody>
<tr>
<td>N</td>
<td>18,187</td>
<td>17,499</td>
<td>--</td>
</tr>
<tr>
<td>Percent</td>
<td>17.8%</td>
<td>17.1%</td>
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<tr>
<td>Foundation Assets</td>
<td>$231 million</td>
<td>$320 million</td>
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<tr>
<td>Program Experience</td>
<td>28</td>
<td>71</td>
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<td>Region Experience</td>
<td>40</td>
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<td>Median</td>
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<td>International Grantmaking Experience</td>
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<td>Mean</td>
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<td>Foundation Type: Community Foundation</td>
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<td>Mean</td>
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<td>Foundation Type: Operating Foundation</td>
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<td>0.05</td>
<td>Mean</td>
</tr>
<tr>
<td>Grant Year</td>
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<td>2009</td>
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</tr>
<tr>
<td>Grant Size</td>
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<tr>
<td>Grant Duration</td>
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<td>Variable</td>
<td>Hyp 1</td>
<td>Hyp 2</td>
<td>Full</td>
</tr>
<tr>
<td>----------</td>
<td>-------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Assets (log, zero-centered)</td>
<td>0.022***</td>
<td>0.033***</td>
<td>0.004</td>
</tr>
<tr>
<td>Assets (log) Squared</td>
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<td>0.009***</td>
<td>0.001</td>
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<tr>
<td>Program Experience</td>
<td>0.043***</td>
<td>0.008***</td>
<td>0.002</td>
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<tr>
<td>Region Experience</td>
<td>0.009***</td>
<td>0.006**</td>
<td>0.002</td>
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<tr>
<td>International Grantmaking Experience</td>
<td>0.127***</td>
<td>0.070***</td>
<td>0.013</td>
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<tr>
<td>Grant Size (log)</td>
<td>-0.041***</td>
<td>-0.033***</td>
<td>0.002</td>
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<tr>
<th>Hypothesis 2: Organizational Perceptions of Uncertainty</th>
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<tr>
<td>Foundation Age (zero-centered)</td>
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<tr>
<td>Foundation Age Squared</td>
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<tr>
<td>Foundation Type: Corporate Foundation</td>
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<tr>
<td>Foundation Type: Community Foundation</td>
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<td>Foundation Type: Operating Foundation</td>
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<tr>
<td>Grant Year</td>
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<td>Foreign NGO Support</td>
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<table>
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<tr>
<th>Constant</th>
<th>0.618***</th>
<th>0.511***</th>
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<tr>
<td>N</td>
<td>31,083</td>
<td>35,538</td>
<td>30,954</td>
</tr>
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* p<0.05, ** p<0.01, *** p<0.001
Figure 1. Classification of tie patterns with regard to extant location of alter organization vis-a-vis the ego organization and field.
Figure 2. Baseline Estimation—Rates of Exploration and Exploitation Over Time

Proportion of Types of Grants by Year

Used to assess best cutoff for analysis (lines are smoothed for readability)
Figure 3. Assets and Institutional Exploration

Relationship between Assets and Propensity for Institutional Exploration
Figure 4. Age and Institutional Exploration

Relationship between Age and Propensity for Institutional Exploration

- Regression Fit Maximum
- Regression Fit
- Empirical Data