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 we 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, we 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. We 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. We find that institutional exploration is an activity engaged in by organizations with greater ability to extract information from their environment, increased ability to influence others in their field, and from institutional environments that support confidence and optimism. 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

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"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.

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 low-risk behavior when engaging in international grantmaking. In the grantmaking context, this would mean, among other behaviors, a high-degree of renewal grants, that is, grants to past, known grantees. 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, We propose and test a theory of learning that moves beyond the organizational-level to consider learning at the level of the organizational field, or what we 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. In this paper, we seek to answer the questions, 1) is institutional learning a useful and substantive conceptual frame of analysis, and 2) if so, what predicts institutional learning and how do organizations respond to this unique uncertainty?

Relative novelty in processes of exploration is important. 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.

On the other hand, network connections that are new for the organization, but not necessarily for the field, what we call "institutional exploitation," also contain important, but different ramifications for the structure of action. A more dense network of connections can increase collaboration and improve the speed and flow of resources and communication (Kapucu, 2006). New connections within an institutional field can also bridge structural holes, subverting hierarchical relationships and redistributing social capital throughout the field (Burt, 1992). As grand challenges themselves suggest, participants in these issues desire increased collaboration, knowledge sharing, and resources. While institutional learning may drive innovation, novelty, and diversity, institutional exploitation may support collaboration, understanding, and fairness for those within the field. Assessing the rates of institutional learning and exploitation can signal the importance of these different values to the participants and may change over time and depending on the issue at hand.

We 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, we 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 of the same organizations, instead creating a well-tended formal garden (Pfeffer, 1993). We 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, we 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. We address this oversight by clarifying the alter organization's location prior to tie formation with the ego organization.

We 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, we 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.

[Insert Figure 1 here.]

This diagram, however, introduces an additional measure of socio-spatial distance, with organizational field boundaries.[1] We 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). We 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). We 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

[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.

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 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, we draw on institutional theory and work on uncertainty. We utilize these older arguments in the service of new conceptual ideas, which we test with unique data. We now present several hypotheses that predict when organizations would engage in each kind of organizational exploration. We explore an organization's ability to extend beyond the field, its ability to impact the field, the field's impact on the organization, and the organization's response to these factors.

H1: Organizational Ability to Extract External Information

We hypothesize that an organization's ability to engage in more exploratory behavior is directly related to their ability to extract information that is not yet extant within the field, and make decisions based on this external information. However, engaging in this information search implies a high degree of market-level 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.

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 we outline three ways in which organizations may utilize their own resources and experience to mitigate uncertainty, potentially leading to greater propensity for institutional exploration.

Resources. An organization's financial resources influence its ability to garner more independent 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, we 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, we 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, we 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, we hypothesize that,

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

H2: Organizational Ability to Influence the Field

Foundations are not created equal. While they vary in size and resources, as mentioned previously, foundations also carry status that give them the ability to be thought leaders, both in terms of strategy and overall grantmaking (Galaskiewicz, 1985). As Galaskiewicz and Burt (1991) found,

foundations look to their grantmaking peers within the field to decide who to fund. In the biotechnology space, venture capitalists looked to the status of prior funders and affiliates of the start-up to assess its viability and found that greater status was associated with greater future investment (Stuart et al., 1999). We take this notion of status to signify a foundation's ability to influence the alters in the field of international grantmaking.

Status. Stuart et al. (1999) show that lower-status actors' decisions are influenced by the high-status actors in the field. Thus, we would expect that middle- and lower-status foundations would engage in more institutional exploitation as they are more likely to perceive and follow the signals from relevant high-status actors. However, Phillips and Zuckerman (2001) propose the idea of middle-status conformity—that those of middle-status would be likely to follow the decision deemed acceptable and legitimate, but that lower-status actors will engage in relatively more innovative and exploratory behavior. Hence, we hypothesize that,

> Hypothesis 2 (H2): *Foundation status* will have a quadratic relationship to institutional exploration, with high- and low-status foundations exhibiting greater institutional exploration than middle-status foundations.

H3: Normative Influences on the Organization

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, we 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, we 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, we hypothesize that,

> Hypothesis 3a (H3a): 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 particular 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, we hypothesize that,

Hypothesis 3b (H3b): Foundations in specialized organizational sub-fields will be positively associated with institutional exploration.

H4: Organizational Response to Institutional Exploration

Amongst these more exogenous factors related to institutional exploration, we also hypothesize that there will be measurable, endogenous qualities related to exploration. While many in the foundation sector applaud the use of "big bets" in social innovation, most handbooks and guides on foundation funding recommend that foundations, like financial investors, account for risk when they decide on their level of grantmaking investment (Brest, and Harvey, 2008).

Investment. More broadly, 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, we hypothesize that,

Hypothesis 4 (H4): Decreased *foundation investment* will be positively associated with institutional exploration.

Together, as Figure 2 shows, these hypotheses cover the comprehensive set of influences across the organization, field, and the environment external to the field. Hypothesis 1 considers the organization's ability to scan the external environment, while hypothesis 4 considers the influence the external environment is able to have on the organization's actions. Hypothesis 2 assesses the impact the organization can have on the field, and hypothesis 3 seeks to understand the normative influences of the field on the organization.

[Insert Figure 2]

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 we obtained from the Foundation Center included limited information about foundation and NGO characteristics. To extend the analysis we 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 we 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 our 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, we

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 previously partnered with another field member, resulting in coding it as institutional exploitation, or it has not, resulting in coding it as institutional exploration. All new grants were coded as these mutually disjoint categories. we 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.[2] Therefore, if an NGO has received a grant in any previous year, a new grant to them was considered a case of 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 *organizational exploration* grants in the dataset, 41,020 (58%) of which were cases institutional exploration, and 29,874 (42%) were cases of institutional exploitation.

As mentioned previously, there still exists considerable variation among these two codes. For future analyses, we 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 ego foundation introduces them to the field. To clarify, we 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,

[2] Assuming any limits of institutional memory attenuates, but does not otherwise alter the results reported, providing a post-hoc empirical basis for this assumption.

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. We 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 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. However, for this initial analysis of institutional learning we keep exploration and exploitation as simple, binary variables.

An immediate limitation that we take into account is that the longitudinal nature 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 we have 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, we 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. We chose this as the threshold year based on empirical analyses (see Figure 3) of when patterns of exploration and exploitation stabilize—change in their respective percentages from year to year become insignificant. For sensitivity analysis, we 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 3, firm-level exploitation steadily increases from 2000-2012. It is impossible to distinguish whether this is due to the limited historical nature of the dataset or if it is indicative of a substantive trend. Thus, we control for grant year in our models but are limited in our interpretation of its result as being artifactual or indicative of an institutional pattern.

[Insert Figure 3 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. We use a heuristic to ensure that grants that may be naïvely coded as organizational exploration as a result of these edge cases are not included in the model. For every foundation that gives an average of at least three international grants each year, we 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. We use an average grant threshold to ensure grants from foundations that do not regularly provide international grants are still included. This allows us 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 Gather External Information.

Organizational Resources. We 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. We include a quadratic term to allow for non-linear differences in foundation behavior across small, medium, and large foundations. In our 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. We 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. We assume that program experience builds knowledge about implementation across multiple geographic contexts and

regional experience builds familiarity with local contexts.[3] 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, we measure *international grantmaking experience* by a foundation's general prioritization of international work. We measure this variable by analyzing the amount of grant dollars given to international causes 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.

H2: Organizational Ability to Influence the Field

Status. Status is operationalized by the eigenvector centrality of the foundation in the complete, co-granting network. In this undirected network, the nodes are foundations and a tie is created between two nodes when two foundations give to the same NGO, regardless of when the grants were made. We use eigenvector centrality as it is a more robust measure of power and influence within a network than alternative centrality measures (Bonacich, 2007). As a sensitivity test, we run the same models with betweenness and degree centrality and achieve the same results. We also include the quadratic term to allow for middle-status conformity results to appear. In the data, foundations range from an eigenvector centrality score of 0 to 0.1, with mean of 0.05.

H3: Normative Influences on the Organization.

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

[3] In the final model we 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.

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 three 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.

H4: Organizational Response to Institutional Exploration.

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, we 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.

Controls and Fixed Effects

Grant Year: As mentioned previously, we control for grant year to help ensure that results are not skewed by the nature of the dataset and the limited grant history we 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. We 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 we do not misinterpret results that may be a result of that 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) we were unable to categorize. We use program fixed effects ensuring that the results we find are not due to issue-specific phenomena that may influence uncertainty. While we would encourage future institutional learning to explore variations across program area and potential grand challenges, we did not observe large, nor interpretable variation across program areas in this dataset.

Region Fixed Effects: Each grant's intended location is coded as being targeted to global causes, Asia, Africa, Latin America, or the Middle East. Some regions include low- and middle-income countries that are typically net aid recipients. For this reason, Korea, Japan, Australia, and New Zealand are excluded. We also exclude grants to Europe and Canada due to their traditionally close relationship, and relatively risk-free nature for U.S.-based foundations. 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. Using region as a fixed effect makes it clear that we do not pull erroneous results that may be the explained by local norms or events in specific regions; this is especially important as we 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

We 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:

[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.

$$Y = b_0 + X\beta + Z\beta + program\ fixed\ effcts + region\ fixd\ effects + \varepsilon$$

Where *Y* 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. *X* represents the set of grant-level characteristics (ex. size, duration, region, etc.). The matrix *Z* represents the set of foundation-level characteristics (ex. size, age, and experience).

RESULTS

Does the uncertainty of the international grantmaking market lead to massive institutional exploitation by foundations? Table 3 shows that is not in fact the case. Institutional exploration and exploitation are remarkably evenly split. Foundations appear to not avoid institutional exploration, but rather engage in a balance, as a portfolio manager may balance their investment risks. Alternatively, the foundations show no distinct preference for innovation or collaboration. Foundations do not seem to avoid uncertainty, but also do not especially seek it out. Table 3 also displays the average values for the dependent and control variables. 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 shy away from field exploration, but rather it is a regular act; institutional learning appears to happen at a regular, steady pace.

Table 3 also shows that the behaviors and traits of institutional exploratory behavior is quite different from those of institutional exploitative actions. While these activities are often grouped together by researchers, these results preliminarily show that these are empirically different actions that deserve a more nuanced analysis. 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 and 1b regarding the role of an organization's ability to extract external information. Models 1 and 5 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 4 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 4 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. We 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. Overall, we find strong support for hypothesis 1—organization ability to extract external information, with added nuance regarding hypothesis 1a—the ability of organizational resources to extract external information.

Table 4 also shows preliminary support for hypothesis 2, which predicts that *foundation status* has a quadratic relationship with institutional exploration. The coefficient for the squared term of eigenvector centrality is positive and significant with $p < 0.001$ in model 2 and model 5, showing that the relationship is indeed positive and quadratic. However, while in model 5, with all controls added, the relationship is quadratic with exploration predicted by high and low status, model 2 shows a monotonically increasing function. Thus, while we can confidently say that high-status foundations

engage in greater institutional exploration, more research is necessary to understand whether this is a case of middle-status conformity or if institutional exploration has a direct, positive relationship with status.

Table 4 presents results testing hypotheses 3a and 3b, regarding the role of norms and subjective perceptions of uncertainty. Models 3 and 5 show partial support for hypothesis 3a, 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 5 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.

[Insert Figure 5 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 age).

Table 4 neither supports nor rejects hypothesis 3b, 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 3. This finding shows that there is more diversity within than between these different broad foundation types.

Table 4 also shows unqualified support for hypothesis 4, 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.

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? We 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 we 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 we seek to understand how organizations operate in these uncertain environments and expand the institutional field. Greater organizational resources help to reduce uncertainty in the external environment, but the findings also suggest that very small amounts of organizational resources can also be associated with activity in external environments. While greater organizational resources seem to have the hypothesized effects of mitigating risk and enabling organizations to learn beyond the knowledge within the field, organizations with the fewest resources may be so marginal they may not see themselves as part of this delineated field and are learning primarily through other avenues. Alternatively, these actors may feel as if they have "nothing to lose." 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). There is also 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, we 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 in the external environment 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. While institutional

exploitation relies on brokers to establish new partnerships, experience may be a way for organizations to go around these information brokers and establish new relations independently, becoming brokers themselves in the process.

High-status actors also displayed a consistent tendency to engage in institutional exploration. These actors may feel less encumbered by the norms of the field, or may understand and embrace the role as leaders and innovators assigned to them by those of lower status. The mixed results regarding low-status actors could mean that in certain environments and situations, low-status may be related to greater institutional exploration. Future research could identify what circumstances may enhance or diminish the exploratory behavior of low-status organizations. In both models, however, middle-status actors were more involved in institutional exploitation, perhaps motivated by their desire to collaborate with or become part of the cliques of high-status actors, picking up on the trends they saw by these "heavy-hitters."

Complementing these status considerations and groupings, we 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, we find that many young foundations founded in the recent entrepreneurial period seem to avoid uncertainty the most.[5] We also find lower rates of exploration among foundations founded at the turn of the 20th century, another period of entrepreneurship and innovation. 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,

[5] This effect could be a result of the significant impact of experience on a propensity towards institutional exploration, as supported by hypothesis 1b, where we may interpret foundation age as a form of organizational experience. Although we control for three varieties of experience in model 1, the strong findings of these three variables imply that other unobserved forms of experience may also be at play. In this way, hypothesis 3a's results could be interpreted as support for both hypothesis 1b and 3a.

whether real or perceived, than attitudes and ideologies regarding risk, innovation, and entrepreneurialism.

Hypothesis 3 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 and across 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.

Even with these exogenous impacts on an organization's propensity to engage in institutional exploration, these organizations also work to mitigate the uncertainty of exploration through their actions, as evidenced by grant size in hypothesis 4. When exploring, 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.

Altogether, these results begin to describe what factors predict institutional exploration. Large foundations, that independently explore the external environment, have high-status, and were founded in ages of economic optimism engage in the more risky, innovative behavior. While the antithesis of these dimensions are more prone towards institutional exploitation—collaborative behavior that increases the density of the organizational networks. When organizations do engage in institutional exploratory behavior, they tend to do so with caution, tentatively reaching out beyond the field to engage new members.

Success in pursuing Grand Challenges likely requires both institutional exploitation and exploration. Understanding the different influences and factors organizations face in this decision is critical to determining where to focus efforts and where successes may arise. We look forward to further understanding the mechanisms behind institutional exploration and exploitation to understand how these grand challenges find their structure and reach positive outcomes for these organizations, and for the world.

Limitations

The current examination of this proposed theory analyzes the context of a single initial investment, not a mutual or ongoing partnership. We 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.

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, the current institutional fields they interact within, and by their own influence within it. 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.

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Table 1. Dimensions of Ego Organization Partner Selection Logic

	Organizational Exploitation	Institutional Exploitation (Organizational Exploration)	Institutional Exploration (Organizational Exploration)
Definition	Reproduction or renewal of existing organizational relationships.	Expansion of organizational ties through exploitation of field ties.	Expansion of both organizational and field ties through inclusion of additional alter nodes.
Organizational-level novelty	Old	New	New
Field-level novelty	Old	Old	New
Primary Source of Knowledge Regarding Alter Organization	Ego Organization	Organizational Field	Outside Organizational Field
Impact of Partner Selection Logic on Network Topology	Tie Strength	Network Density	Network Expansion

Table 2. Descriptive Statistics

Statistic	N	Min	Median	Mean	Max	St.Dev.
Foundation Assets	34,556	$1	$264 million	$3.12 billion	$38.84 billion	$7.82 billion
Program Experience	35,686	0	45	169.35	2,015	315.06
Region Experience	32,156	0	58	180.50	1,742	305.19
International Grantmaking Experience	34,553	0.00	0.21	0.28	1.00	0.25
Eigenvector Centrality	35,505	0	0.05	0.05	0.10	0.03
Foundation Age	35,538	1	39	41.02	107	25.16
Foundation Type: Corporate Foundation	35,686	0	0	0.21	1	0.40
Foundation Type: Community Foundation	35,686	0	0	0.12	1	0.33
Foundation Type: Operating Foundation	35,686	0	0	0.04	1	0.20
Grant Year	35,686	2005	2009	2008.61	2012	2.31
Grant Size	35,686	$10,000	$50,000	$285,000	$461 million	$3.564 million
Grant Duration	35,686	1.00	1.00	1.18	25	0.59
Foreign NGO Support	35,686	0.00	0.31	0.37	1.00	0.33

Table 3. Institutional Exploitation and Institutional Exploitation Descriptive Statistics—Average Values

Statistic	**Institutional Exploitation**	**Institutional Exploration**
N	18,187	17,499
Percent	17.8%	17.1%
Foundation Assets	$231 million	$320 million
Program Experience	28	71
Region Experience	40	94
International Grantmaking Experience	0.25	0.31
Eigenvector Centrality	0.054	0.054
Foundation Age	39.6	42.5
Foundation Type: Corporate Foundation	0.19	0.23
Foundation Type: Community Foundation	0.14	0.10
Foundation Type: Operating Foundation	0.03	0.05
Grant Year	2009	2009
Grant Size	$50,000	$41,512
Grant Duration	1.16	1.20
Foreign NGO Support	0.26	0.48

Table 4. OLS Model for Institutional Exploration

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Hypothesis 1: Ability to Gather Information					
Assets (log, zero-centered)	-0.005				0.040***
	(0.004)				(0.005)
Assets (log) Squared	0.003**				0.010***
	(0.001)				(0.001)
Program Experience	0.045***				0.012***
	(0.002)				(0.002)
Region Experience	0.011***				0.013**
	(0.002)				(0.003)
International Grantmaking Experience	0.062***				0.068***
	(0.013)				(0.013)
Hypothesis 2: Ability to Influence Field					
Eigenvector Centrality		0.020***			-0.024***
		(0.003)			(0.004)
Eigenvector Centrality Squared		0.028***			0.034***
		(0.003)			(0.003)
Hypothesis 3: Normative Influences					
Foundation Age (zero-centered)			0.047***		0.003
			(0.003)		(0.003)
Foundation Age Squared			-0.024***		-0.017***
			(0.003)		(0.003)
Foundation Type: Corporate Foundation			0.048***		0.018**
			(0.007)		(0.009)
Foundation Type: Community Foundation			-0.093***		0.087***
			(0.008)		(0.010)
Foundation Type: Operating Foundation			0.158***		0.037*
			(0.014)		(0.015)
Hypothesis 4: Response					
Grant Amount (log)				-0.017***	-0.030***
				(0.002)	(0.002)
Controls					
Grant Year					-0.003***
					(0.001)
Grant Duration					-0.003
					(0.005)
Foreign NGO Support					0.327***
					(0.011)
Constant	0.239***	0.676***	0.460***	0.511***	7.305***
	(0.007)	(0.021)	(0.004)	(0.004)	(2.345)
N	31,083	35,686	35,506	35,538	30,812
Region and Program Area Fixed Effects	No	No	No	No	Yes
Adjusted R-squared	0.050	0.002	0.003	0.016	0.168

* 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.

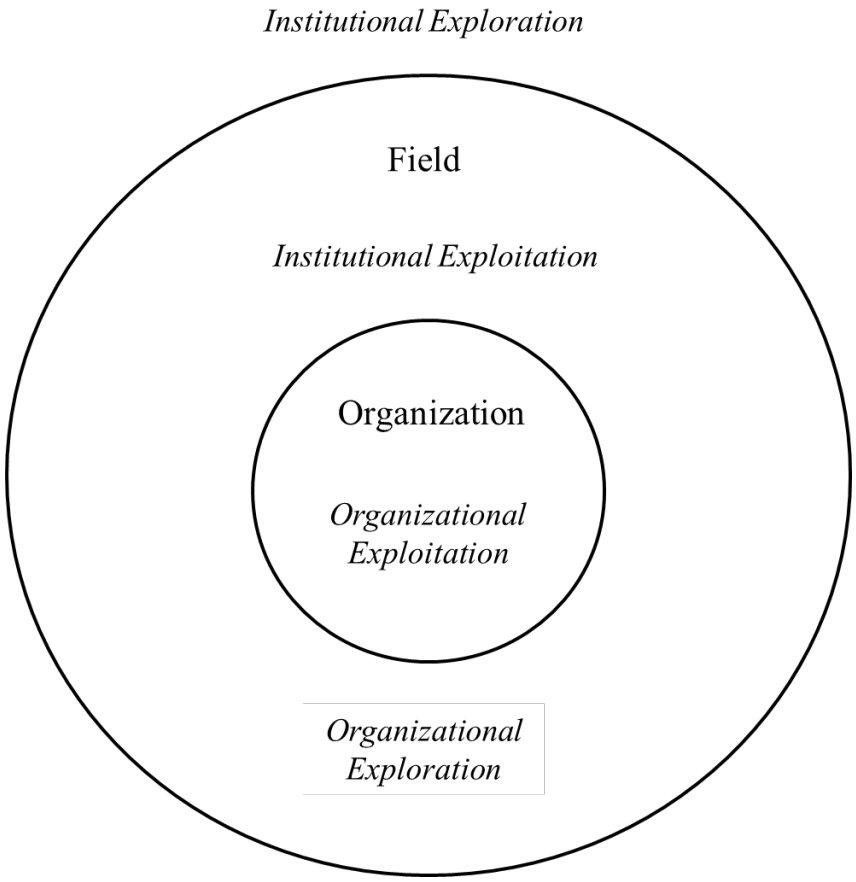

Figure 2. Hypothesis Logic – Influences across the Organization, Field, and external Environment

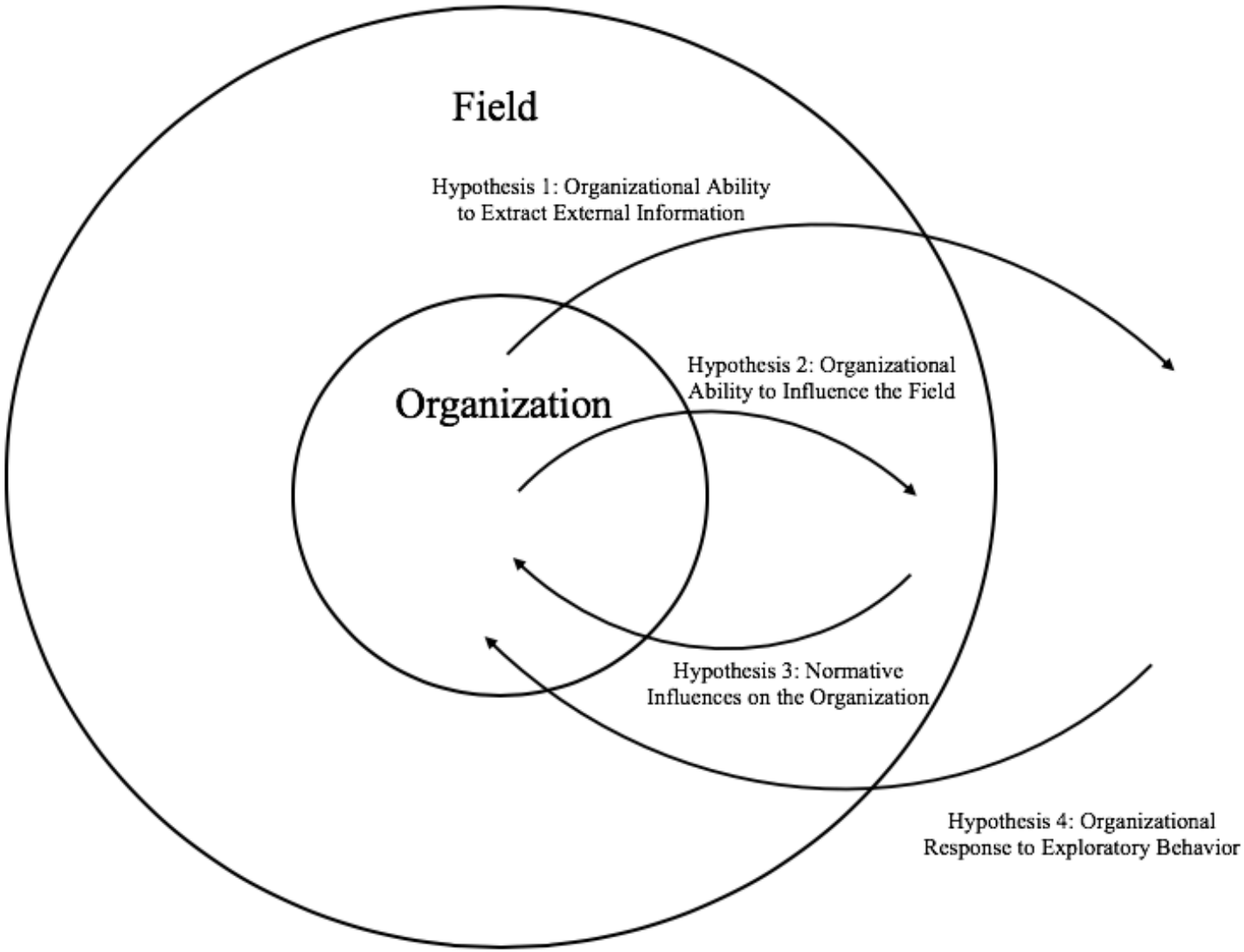

Figure 3. Baseline Estimation—Rates of Exploration and Exploitation Over Time

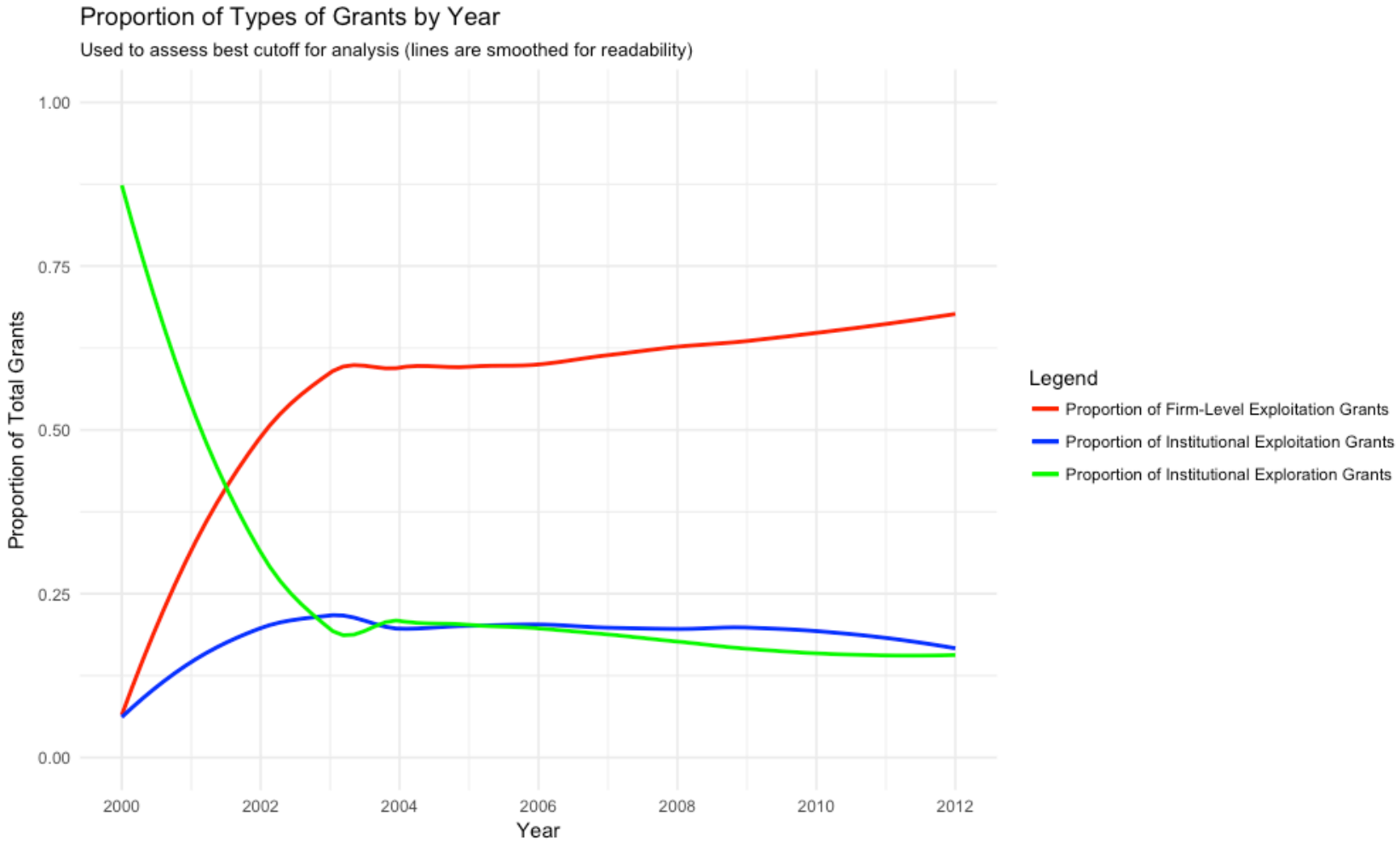

Figure 4. Assets and Institutional Exploration

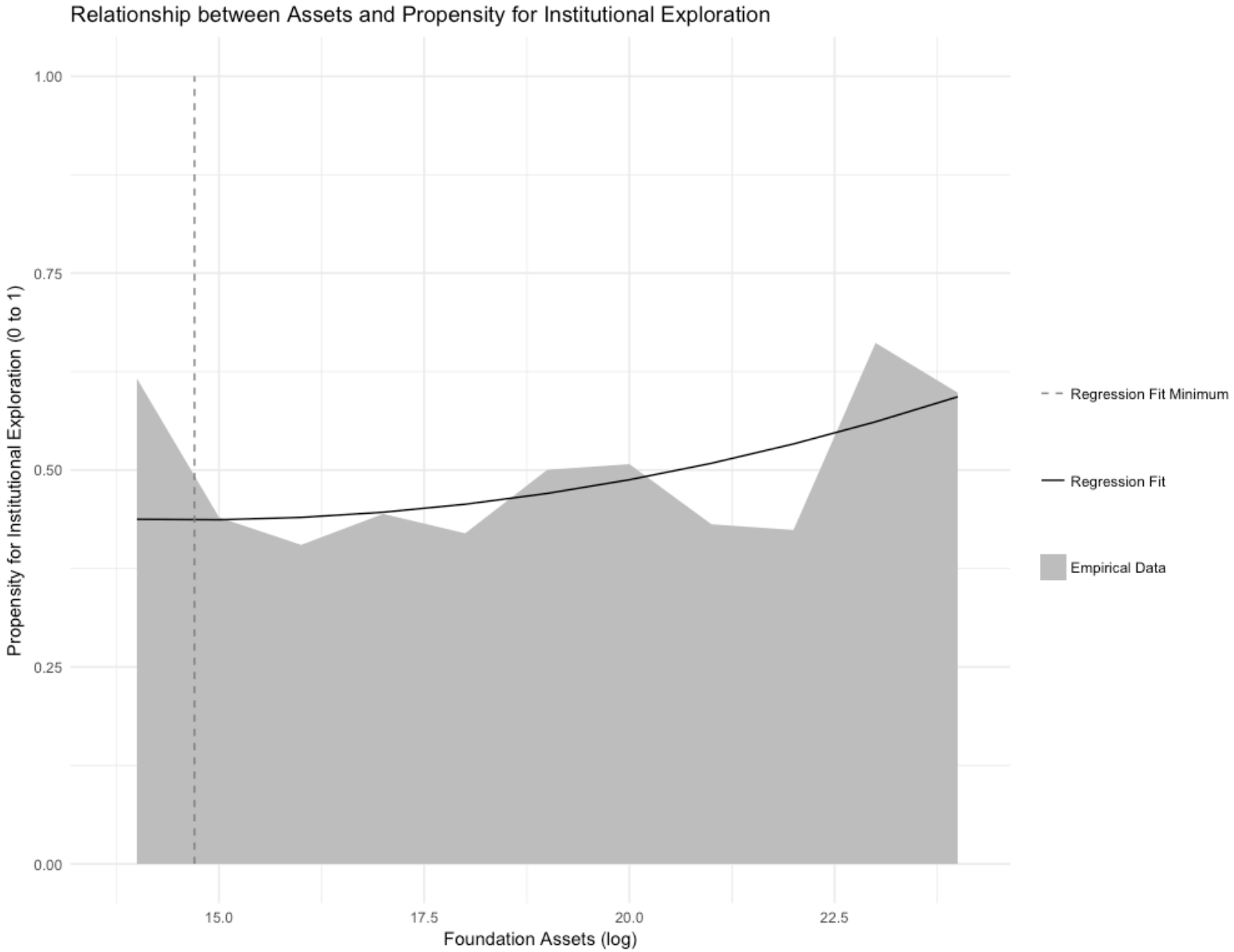

Figure 5. Age and Institutional Exploration