Reciprocity or Monetary Incentive? Entrepreneurs’ network activation strategies and access to investors

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Abstract
The entrepreneurial networks literature has shown that entrepreneurs’ personal network features influence valued venture performance outcomes, such as accessing financing. However, an implicit assumption in this literature is that entrepreneurs’ activation of their network ties is unproblematic. By network tie activation we mean the specific ways in which entrepreneurs communicate with their network contacts to elicit their cooperation and thus access valuable resources. We ask how entrepreneurs activate their network contact to secure referrals to seed-round venture capital investors. We adopt Fiske’s (1991) elementary relational models framework to articulate two mechanisms that entrepreneurs could use to activate a network tie: reciprocity or monetary incentives. Reciprocity refers to entrepreneurs’ communication strategies that stress dyadic or generalized reciprocity, which leads network contacts to frame the request for help as egalitarian social exchange. Monetary incentive refers to communication strategies that emphasize network contacts financially benefiting from rendering assistance, that leads contacts to frame the interaction using a calculus of benefits and costs in self-interested exchange. We test our predictions in two studies. Study 1 is a field experiment conducted at an entrepreneurship accelerator in India. We manipulate entrepreneurs’ communication with network contacts and observe whether the contact refers the entrepreneur to targeted seed-round investors. Study 2 is a within-subject vignette design with subjects drawn from the Singapore entrepreneurial ecosystem. Our results suggest communication strategies that highlight reciprocity may be a better way for entrepreneurs to secure assistance from network contacts.
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A key insight in research on entrepreneurs’ personal networks (Aldrich, 1999) is that better connected entrepreneurs are more likely to mitigate their new venture’s liabilities of newness and smallness (Stinchcombe, 1965). Research on entrepreneurial networks has focused on how the structure and quality of entrepreneurs’ interpersonal network connections influences flow of valuable resources from resource-holders (see Hoang & Yi, 2015 for a recent comprehensive review of extant research). Scholars have shown that entrepreneurs whose personal networks are larger, less dense (i.e. fewer interconnections between their contacts) or had a greater proportion of strong connections, launch ventures that go to market faster (Davidsson & Honig, 2003), acquire new capabilities (McEvily & Zaheer, 1999) and experience greater overall grow (Vissa & Chacar, 2009; Shane & Stuart, 2002). In addition, research has demonstrated that the value of entrepreneurs’ interpersonal connections is contingent on factors like financial market uncertainty (Gulati & Higgins, 2003), consensus within the venture team (Vissa & Chacar, 2009) and task role alignment (Kim et.al. 2013). This prior work largely treated personal networks as entrepreneurs’ endowments and proceeded to examine their performance consequences.

More recent research unpacked the endowment assumption to more closely examine how entrepreneurs engage in reflexive choice and demonstrate agency (Emirbayer and Goodwin 1994) in managing their personal network. This stream of work highlights the importance of entrepreneurs’ actions in the creation and shaping of personal network ties. For example, scholars have shown that the focal entrepreneurs’ behaviors such as negotiating tactics (Hallen & Eisenhardt, 2012), networking style (Vissa, 2012) and intentional strategic matching (Vissa, 2011) influence resource mobilization by shaping the structure and quality of entrepreneurs’ personal networks. Though this work has shed useful light on how entrepreneurs often maneuver themselves into becoming better connected and the resultant performance consequences, there is
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another critical assumption in extant entrepreneurial networks research that is holding back theoretical and empirical development. Extant research implicitly assumes that entrepreneurs know how to interact with their network contacts to elicit their cooperation that enables resource flow. In other words, the flow of valuable resources from personal network contacts to the focal entrepreneur is deemed unproblematic. In this study, we unpack this assumption to shed light on how entrepreneurs activate their network contacts. By network activation we refer to specific ways in which entrepreneurs communicate with their network contacts to elicit their cooperation and thus gain access to valuable resources.

We study the network activation process in the context of entrepreneurs seeking referrals from their personal network contacts to reach seed-round investors. Prior work (e.g. Hallen, 2008; Shane & Cable, 2002) shows that early stage investors such as seed-round venture capitalists or angel investors pay greater attention to entrepreneurs’ funding requests that are referred to them by their trusted network contacts; referrals are valuable to such investors because it acts as an initial filtering device that ameliorates the high cost of conducting due diligence in the highly uncertain situation that is typical for early stage start-ups. Hence our specific research question: How do entrepreneurs activate their network contacts to secure referrals to seed-round investors? We develop a conceptual model of the network tie activation process by drawing on Fiske’s (1991) taxonomy of elementary relational models that underpin human social interaction. Fiske, (1991) proposes four cognitive models as cultural universals that are the source of both motives and norms for humans in organizing their social life: market pricing, authority ranking, equality matching and communal sharing. Applying this framework to our context, we argue that equality matching that stresses mutuality and reciprocity in relationships and market pricing that invokes rational calculations of benefit-cost ratios in self-interested exchange are two relevant pathways that entrepreneurs could use to activate a network
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tie. We refer to these two pathways as respectively reciprocity and monetary incentives. Reciprocity refers to communication strategies that trigger a network contact’s (henceforth referee) motive to help the entrepreneur by building a concern for dyadic or generalized reciprocity (Gouldner, 1960) in the referee. Monetary incentive refers to communication strategies that highlight how referees may financially benefit from rendering assistance to the entrepreneur. It is unclear which of these alternative pathways is more effective in securing assistance from referees, and we aim to shed light on this issue.

We test our model using two experimental studies. Study 1 uses data from a field experiment involving 648 entrepreneur-referee-investor triads in India. The entrepreneurs in this sample consisted of founders of high growth, technology-oriented ventures seeking professional investment. The entrepreneurs’ task was to activate their network contacts to forward their venture’s pitch deck to a target set of four early-stage professional investors specified by the research team. Entrepreneurs whose venture pitch decks were successfully received by an investor gained a fifteen-minute individual pitch with the investor. We first elicited a set of network contacts from each entrepreneur’s personal networks that could act as potential referees, manipulate how entrepreneurs communicate with those potential referees and subsequently observe whether the potential referee actually renders assistance to the entrepreneur by referring him to the targeted professional investors. Our manipulation consisted of randomly assigning elicited potential referees into the following communication strategies through which the focal entrepreneur activates their network: baseline condition, monetary incentive condition, reciprocity condition and hybrid condition (mix of reciprocity and monetary incentive). Study 2 is a vignette based within-subject design with a sample of 21 subjects drawn from the Singapore entrepreneurial ecosystem. Subjects play the role of potential referee and we dig deeper to understand the mechanisms at play that motivate referees to render assistance to an entrepreneur.
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they know. Our results suggest that communication strategies that emphasize reciprocity are a better way for entrepreneurs to secure assistance from a network contact.

ENTREPRENEURIAL NETWORKS AND RESOURCE MOBILIZATION

Scholars view the personal networks of entrepreneurs as conduits for the flow of relevant, valuable resources (Aldrich, 1999; Aldrich & Zimmer, 1986). Researchers have examined how personal network structure and quality affect resource flow and thus influence early venture outcomes. Network structure, measured by network density or structural holes, as well as network quality measured by tie strength or the proportion of strong ties, have been shown to predict important outcomes such as acquiring competitive capabilities (McEvily & Zaheer 1999), venture growth (Vissa & Chacar 2009), access to financing (Shane & Stuart 2002) and other resources (see the recent comprehensive review by Hoang and Yi, 2015). However, this research largely treats personal networks as endowments and assumes away differences in the extent to which individual actors shape their networks.

A growing stream of literature on the agentic perspective on entrepreneurial networks examines individual differences in how actors form new ties and manage existing ones thus shaping their personal networks. Scholars in this stream draw on the fundamental assumption of human agency implicit in prior work that reveals entrepreneurs as energetic purveyors of stories and symbols (e.g. Lounsbury & Glynn, 2001) and as orchestrators of thriving organizations even in severely resource constrained environments (e.g. Baker & Nelson, 2005). Vissa (2011) documents the impact of network-broadening and network-deepening behaviors on entrepreneurs’ networks over time, finding that some particularly agentic entrepreneurs are especially adept at adding new social contacts to their networks. Several studies have documented specific approaches entrepreneurs take to attract partners. Zott and Huy (2007)
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document symbolic management actions that convey an entrepreneur’s credibility and professionalism by emphasizing their credentials, affiliations, and personal reliability. In a similar vein, Hallen and Eisenhardt (2012) document several catalyzing strategies that entrepreneurs use to cultivate ties to investors, such as negotiating in parallel with multiple potential partners. This agentic view of entrepreneurial networks accords primacy to the deliberation and choice inherent in undertaking those actions, rather than the role of pre-existing network structure as the driver of entrepreneurial resource mobilization. Although this agentic perspective has shed useful light on how entrepreneurs actively manage their personal network, we still lack insights into precisely how entrepreneurs reach out to their network contacts and elicit their cooperation in their quest to access valuable resources. In short, we don’t know how entrepreneurs activate their contacts in ways that lead to valuable resource flows. By network activation we refer to the communication strategies that entrepreneurs can deploy to elicit their network contacts’ cooperation in the context of the entrepreneur’s search for valuable resources. We situate our study by first turning to the literature on ‘small worlds’ (Milgram, 1967) to understand how individuals undertake search through their social networks.

Social search in inter-personal networks

The broader research on social networks under the rubric of ‘small worlds’¹ (Milgram, 1967) studies examines how a focal individual can reach any other randomly drawn individual (target) through a chain of social ties (intermediaries). In their seminal work on the small world phenomenon, Travers and Milgram (1969) reported that an average of only five intermediaries

¹ We note that a parallel literature (e.g. Watts & Strogatz, 1998) identifies how the structure of the overall social system influences the small-worldness (or average path length) of searches by actors in the system. They find that high local clustering combined with short global separation leads to short path lengths on average (i.e. small worlds). Our focus here is on reviewing studies that examine variation due to individual level factors around that average.
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seemed to connect any two randomly drawn strangers in the US – suggesting social search to connect with a stranger is less daunting than it sounds. Subsequently, using a sample of 24,163 email chains generated by about 61,168 individuals trying to reach 18 targets across the globe, Dodd et al (2003) provide strong evidence that successful social search is conducted primarily through intermediate to weak strength ties and does not require highly central “hubs” to succeed. Singh, Hansen and Podolny (2010) extend this research to examine social search within an organizational context, where the searcher (a randomly drawn employee) is looking for subject matter experts (the targets) but the precise identity of the targets may be unknown to the searcher. Singh et al (2010) provide evidence that because social search largely proceeds through activation of homophilious (McPherson et.al. 2001) contacts (gender and tenure in their setting) there is substantial variation in which searchers successfully complete their search.

The aforementioned literature on small world networks focuses on variation in which network contact the searcher reaches out as well as the length of the search path, all the while keeping constant the communication strategy that the searcher uses to elicit the contact’s cooperation. This prior work finds chain lengths of around 6 to 7 intermediaries to reach an ex-ante defined target. However, this literature is less likely to generalize to search in the context of entrepreneurial resource mobilization because of the greater uncertainty, resource scarcity and competitive intensity of the entrepreneurship context.

**Referral based search in entrepreneurial networks**

Prior work on entrepreneurial networks examines referral-based searches in early growth stage start-ups, where the unfolding social search chain consists of two links. Thus Vissa (2012) examines determinants of referrals – the process by which the entrepreneur’s network contact (the referee) endorses the entrepreneur to a valued resource holder (the target). This work
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contrasts entrepreneurs’ referral-based search strategy with a ‘going direct’ strategy. While useful, this research has not examined precisely how entrepreneurs communicate with a referee to obtain her cooperation. Understanding communication strategies is critical because a necessary condition for resource mobilization through network contacts as intermediaries is eliciting the cooperation of the intermediary so that she ‘opens the door’ for the entrepreneur to interact with resource-holders (such as seed-round investors). Understanding the effectiveness of different communication strategies (such as using reciprocity or monetary incentives) in eliciting referees’ cooperation is thus important to unpack the referral process though which entrepreneurs mobilize resources. We turn to Fiske’s (1991) model to shed light on this issue.

Relational Models Theory

Drawing on his anthropological research Fiske (1991; 1992) proposed the Relational Models Theory as a basic framework underlying human social interaction. A key assumption of the model is that sociality is a fundamental characteristic of human beings. Building on an exhaustive review of prior theorizing on relationships in sociology, social anthropology and social psychology, Fiske (1991) argues for the existence of four fundamental, culturally universal cognitive models as the source of both motives and norms for people in organizing their social life: market pricing, authority ranking, equality matching and communal sharing.

Market pricing relationships are based on a model of proportionality in social relationships. Under market pricing a focal actor evaluates a social interaction in terms of cost-benefit ratios and rational calculations of efficiency or expected utility in self-interested exchange. When an interaction is construed as a market pricing relationship, the individuals involved share resources when the reward is considered sufficient. This relational model is
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perhaps the dominant way of conceptualizing resource mobilization in the entrepreneurship literature (Clough et al 2018).

Authority ranking relationships are based on a model of asymmetry among people who are linearly ordered along some hierarchical social dimension – such as rank in a formal organizational. Because our study focuses on entrepreneurial founders reaching out to their external network contacts to generate referrals to investors, matters of hierarchical arrangements are less relevant in our setting.

Equality matching interactions are based on egalitarianism. Individuals are primarily concerned about whether a relationship is balanced (dyadic reciprocity). This view on relationships characterizes theories of social exchange and dyadic reciprocity (Blau, 1964) which emphasize the trust involved in initiating such exchanges and the implicit sense of obligation to reciprocate. Communal sharing relationships are based on a conception of some bounded group of people as equivalent and undifferentiated. In this kind of relationship, the members of a group or dyad treat each other as all the same, focusing on commonalities and disregarding distinct individual identities. In short, individuals pool their resources, which they treat as belonging to a larger whole that transcends its individual members, which is often termed generalized reciprocity (Sahlins, 1965). We combine Fiske’s (1991) equality matching and communal sharing modes of interaction to examine how concerns of reciprocity – both dyadic and generalized, may motivate a network contact (the referee) to render assistance to the entrepreneur.

A key implication of Fiske’s (1991) model is that interaction between humans is rarely asocial; a given interaction would fall into one of the four fundamental models or a combination of these models. Fiske (1992) colorfully describe an asocial interaction as follows: “People operating in a null mode disregard all social qualities of the people whom they affect: They do
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not recognize any shared standards or ideals as governing the interaction, *any more than one does when stepping around a tree*. In short, Fiske’s (1991) model implies that actors will define a situation as belonging to one of the four fundamental models or some combination of those models; there is no asocial action! This is important for our theorizing because we compare the relative strength of communication strategies that invoke either monetary incentives or reciprocity with respect to each other rather than comparing with a null, asocial evaluation. Further, because strong theoretical arguments exist for why reciprocity might be more effective than monetary incentives and vice versa, we propose below, competing hypotheses on the effectiveness of reciprocity or monetary incentive in eliciting cooperation from network contacts.

**Reciprocity versus monetary incentives in eliciting network contact’s cooperation**

There are two broad explanations that undergird the focal network contact’s (the referee’s) motivation to render assistance to the entrepreneur by referring the entrepreneur to a valued resource-holder – in our specific context, the assistance consists of forwarding the entrepreneur’s venture pitch deck to targeted seed-round investors.

The first explanation is the instrumental benefits that the network contact (referee) may secure by acting as an intermediary and helping the entrepreneur. To the extent that the referee is a ‘player’ (Burt, 1992) who is keenly calculating the instrumental benefits of his or her structural position, clearly specifying the monetary benefits of taking a particular course of action may spur him or her into rendering assistance to the entrepreneur. This view of individuals’ motivation is also consistent with the neo-classical economics perspective that rational actors would choose the course of action that makes them financially better off. Empirical evidence (e.g. Pentland, 2014) suggests that monetary incentives could be a powerful lever underlying network contact’s motivation to render assistance, particularly in a competitive context. This explanation for the
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network contact’s motivation suggests that a communication strategy that brings monetary incentives into salience is much more likely to be effective (when compared to reciprocity) in soliciting the network contact’s cooperation.

The second explanation is consummatory motivations (Portes, 1998) spur the network contact into rendering assistance to the entrepreneur. Consummatory motivations refers to internalized norms that compel an individual to act in a particular way. When the network contact has internalized norms that upholds solidarity with the broader community (termed bounded solidarity by Portes and Sensenbrenner, (1993)), or norms that upholds reciprocity in dyadic exchanges, a communication strategy that stresses generalized or dyadic reciprocity is likely to be more effective in soliciting the contact’s cooperation. This explanation implies that a communication strategy that brings reciprocity into salience is much more likely to be effective (when compared to monetary incentives) in soliciting the network contact’s cooperation.

Because prior research does not provide much guidance on adjudicating between these alternative pathways that link communication strategies (monetary incentives versus reciprocity) to effectiveness in securing assistance, we propose competing hypotheses on the relative effectiveness of monetary incentives and reciprocity as stated below.

**Hypothesis 1:** Invoking monetary incentives is more likely to lead to a network contact referring the entrepreneur to a targeted seed-round investor when compared to invoking reciprocity

**Hypothesis 2:** Invoking reciprocity is more likely to lead to a network contact referring the entrepreneur to a targeted seed-round investor when compared to invoking monetary incentive
METHODS

We conducted two studies to test our hypotheses. In the first study, we conducted a field experiment with start-up teams via an entrepreneurship incubator. In the second study, we recruited professionals in the entrepreneurial ecosystem to participate in an online scenario study.

Study 1

We collected the data for the study at a local government operated incubator in Hyderabad, India. At the time of the study it was India’s largest incubator with 70,000 square foot of building space for start-ups. We used the help of the incubator to recruit start-ups to participate in the study. The start-up's team members were offered feedback on their social capital using a popular social capital instrument as a reward for participating in a study (http://nexos.com.sg/educational-software/social-capital-questionnaire/). At the time of recruitment, the start-up teams were not told the specifics of the study other than the general information that the study was to examine social networks. On the day of the study, all the start-up team members present were provided with a detailed explanation of the experiment, including the manipulation and random assignment of the manipulation. Informed consent was obtained from the start-up team members after providing the complete information and before commencing the study.

Participants. Eighteen start-up teams signed up for the study. On the day of the study, we described the entire study to the start-up teams, showed all the four emails templates to the start-up teams and explained that we would randomly assign the email templates to their network contacts. We then revealed the names of the four investors to the start-up teams and asked them to commence the task of generating up to twelve contacts per team. After sharing the complete structure of the exercise and revealing the names of the panel of investors, three teams dropped
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out of the study. One team dropped out because they did not want to participate in the study as it was a social experiment, another team because they were a late stage venture with already substantial VC funding, and yet another team because one of the empaneled investors had invested in a competing start-up. We assured the start-ups that dropped out that they would receive their social capital feedback similar to others who participated in the study, i.e., the teams were free to withdraw with no penalty whatsoever. One other team did not provide us with a confirmation of sending emails using the template assigned by us and was dropped from main analysis of the study, keeping the team’s observations in the sample did not change the results of the study. The final sample for this study consists of 14 start-ups.

Design of the field experiment: Find the Funder Contest

We used the prior contacts of one of the authors to recruit four well-known early stage investors investing in India. Two of the investors were general partners of well-regarded early-stage venture capital funds; the other two were well-regarded angel investors, who were previously successful entrepreneurs. All four investors were male, aged between 35 and 65. Three of the investors were based in India and one investor in Singapore. The investors had committed to listening to a one-one-one pitch and providing feedback to each of the teams whose pitch deck reaches them through a source they know and trust. All four investors were made aware of the complete design of the experimental study including the experimental manipulation described below as well as the fact that the teams that successfully reached the investors stood to win financial rewards as part of the ‘find a funder contest’. The objective of the exercise was for the start-up teams in the study to activate their network to reach the investors for the investors’ feedback. The names of the investors were not revealed to the start-up teams before the commencement of the study.
Experimental manipulation. The chief concern of any network activation study is that teams with higher unobserved ability, however, defined, may also have a larger and more beneficial social network that enables them to purposely activate their network to reach a goal. To overcome this unobserved heterogeneity biasing the results we designed a within start-up team randomized manipulation. We asked each start-up team to provide us with a list of twelve names of individuals who the start-up teams believed were most likely to enable them to reach the investors. We then randomly allocated each contact to receive one of four email templates: baseline, monetary incentive, reciprocity, and hybrid (monetary incentives and reciprocity combined) that were to be used to by the start-up teams to communicate with the network contact to enlist her support in reaching investors.

Treatments. The first was the baseline email template that provided information to the contact of the start-up about the study and sought the help of the contact in reaching the investors in a neutral language. Second, the monetary incentive template provided information on cascading monetary incentives that could yield up to Rs 10,000 (approximately US$ 150/-) to referees – which is not an insignificant amount in an emerging economy like India. Third, the reciprocity template was designed to trigger dyadic reciprocity to the start-up team as well as generalized reciprocity to the entrepreneurial ecosystem in India. Fourth, the hybrid template combined the monetary incentives and reciprocity language. Appendix 1 provides details of the common instructions given to all start-up teams and their network contacts (referees) and Appendix 2 gives details of the email text that serve as experimental manipulation for the four conditions in this study.
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Unit of Analysis

The unit of analysis is a triad association of start-up team (14 start-up teams), start-up team’s contact (up to 12 contacts per team), and an investor (4 investors). In all, we have 14 teams with 159 unique contacts. Furthermore, three contacts were named by two different start-up teams as intermediaries to reach the investors. Further, while 13 teams listed 12 contacts (156), one founding team listed only 6 contacts (156+6=162-3 overlapping contacts=159). The units of analysis for the study is a triad (a start-up, a contact, and an investor). The number of triads in our sample is 648 (162 contacts (allowing for double counting of three contacts) * 4 investors).

Dependent variable

The dependent variable for the study was whether a network contact nominated by the start-up team reached an investor. We informed the investors that they should only accept contacts from those who they would in the normal course of their business receive and review the business plans. The investors informed us which individual representing which team reached them. The dependent variable ‘reached investor’ is coded based on culmination of a process that starts with the start-up team nominating a network contact, the contact registering on the webpage, and culminates if the start-ups business plan is forwarded to the contact to an investor and the investor acknowledges the receipt of the business plan; if all the steps of this process are met then the triad takes a value of 1 otherwise it is zero. About three percent of the network contacts (referees) successfully forwarded venture pitch decks to targeted investors (19 out of 648). To the best of our knowledge, this is the first study to examine the success rate of referrals to seed-round investors, so we are unable to benchmark the average in this study with prior literature. However, we note that this success rate is higher than the 1.6% (384 of 24,163) completion rates reported by Dodds et al (2003) who study social search in a non-organizational and non-task context and much lower.
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than the 28% (107 of 381) reported by Singh et al (2010) who examined social search in a task-context within a single for-profit firm. It is also useful to recall that both Dodds et al (2003) and Singh et al (2010) examine social search in a context where there is no reputational risk to the network contact who is acting as an intermediary; in contrast the intermediaries in our study (the referees) are endorsing the start-up venture to the seed-round investors (the targets).

If a network contact nominated by the start-up does not register on the webpage, the triad value is zero. About twenty percent of the nominated contacts registered on the webpage (32 out of 162). If a contact registers but is not able to reach an investor the triad value is set to be zero. If the contact registers, reaches an investor, but the investor does not acknowledge the receipt, i.e., not from someone who the investor would in the normal course of business receive and review a business plan then also the triad value is set at zero. We had no instances of this in our analysis sample. See Figure 1 for a flowchart illustrating the coding procedure.

---Insert Figure 1 here---

Treatment variables

A contact nominated by the team could receive one of four email templates as assigned randomly by the experimenter. The email templates were: baseline, monetary incentives, reciprocity and hybrid (reciprocity + monetary incentives). We use a four category indicator variable to code for the four types of treatment.

Estimation strategy

We use a logit estimation to estimate the likelihood that a contact will reach investors with the randomly assigned four email templates: baseline, monetary incentive, reciprocity and hybrid.
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(reciprocity + monetary) as explanatory variables. We use fixed effects for each start-up so that any unobserved differences between the start-ups do not bias the results.

**STUDY 1 RESULTS**

In Table 1 we report the mean and standard deviation of the average closeness of the contact with the team members, the average number of years team members knew a contact and the probability that a contact will successfully reach an investor by the condition. In Table 2 we test if the means of the three variables above are different by condition. If randomization worked as intended, we would expect no systematic differences between the four conditions by the three variables of interest. We find that 17 of the 18 tests of differences are not significant. Only one test of differences out of the 18 is significant. The probability that a contact will reach an investor is significant between the baseline and hybrid condition (p=.01). However, there are no other systematic differences. Overall, we interpret this set of results as evidence that our randomization procedure worked as expected.

In Table 3, we report the results of the logit estimation of the probability that a network contact (referee) will reach an investor, with fixed effects for the start-ups. We use the monetary incentive condition as the comparison category and compare it to reciprocity, baseline, and hybrid (reciprocity + monetary incentive) conditions. The probability that an entrepreneur’s reciprocity-priming email to referee is successful in reaching the targeted investor relative to the same entrepreneur’s monetary incentive priming email is positive and significant (β = 1.17, p = 0.089). This supports the second (H2) of our competing hypotheses, which argues that reciprocity is more likely to be successful compared to monetary incentive. Note that there are no differences between the monetary incentives and baseline or monetary incentives and hybrid condition.

--- Insert Tables 1-3 about here ---
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Study 2

In Study 1, we did not have information on contacts who forwarded the pitch-deck emails even if they ultimately did not reach the investors. Hence, in Study 2, we sought to investigate which type of request would elicit more cooperation from contacts in terms of forwarding the emails to others. In this study, we explicitly focused on the network contacts’ perspectives. Similar to the context in Study 1, we asked participants to imagine themselves receiving requests to forward pitch decks to potential investors; in other words, our subjects were to play the role of network intermediaries.

We employed a snowball sampling method to recruit professionals working in the entrepreneurial space in Singapore. These professionals had to have at least one of the following status: entrepreneur, venture capitalist, angel investor, owner / co-owner of a business. Undergraduates enrolled in introductory organizational behavior courses in a Singapore university had to recruit one working professional each in return for subject pool credits.

Participants. We had a total of 35 contact information submissions from the undergraduate subject pool. Of the 35, we had 22 participants who completed the survey, for a response rate of 62.9%. One entry had to be dropped because the participant indicated an unemployed working status. Ultimately, there were 21 participants in this study with an average age of 35.2 years (S.D. =13.7; 12 males, 9 females). Of these, 12 were entrepreneurs (7 of them also owned or co-owned businesses) and 9 of them were business owners or co-owners. They had an average working experience of 11.6 years (S.D. =12.7).

Experimental design. Participants had to read a scenario about receiving two requests (Reciprocity versus Monetary Incentive) from their contacts (see Appendix 3 for full scenario). The scenario
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described that they received two emails from their contacts, Jackie and Kris, whom they met at an entrepreneurship event. In the emails, both Jackie and Kris mentioned that they have incorporated their own companies in the previous month and were both seeking funding from potential investors to grow their venture. They request the participant to forward their pitch decks to people that the participants might know who can help connect them with potential investors. In the monetary incentive treatment, Jackie mentioned that the participants will be paid for their efforts if any potential investors agreed to read the pitch deck. In the reciprocity treatment, Kris mentioned that Kris will be very grateful and will hope to reciprocate in future. In order to avoid naming effects, we switched the content of what Jackie and Kris said (i.e. Kris monetary incentive and Jackie reciprocity) and counterbalanced both versions across the participants (9 saw Jackie Reciprocity, Kris Monetary Incentive; 12 saw Kris Reciprocity, Jackie Monetary Incentive).

Dependent Variable. After reading the scenario, participants were asked to respond to an open-ended question: “In your own words, whose request do you find more appropriate, and why?” Two independent coders who were blind to the hypothesis coded the text responses into one of three categories: Jackie, Kris, Both / None. There was 100% agreement on the coding of the 21 responses. Subsequently, we coded for the responses as Reciprocity, Monetary Incentive, or Both / None, according to the version that was presented to the participants (i.e. whether Kris was Reciprocity and Jackie was Monetary Incentive, or whether Jackie was Reciprocity and Kris was Monetary Incentive).

STUDY 2 RESULTS

Of the 21 responses, 13 were coded as Reciprocity, 5 were coded as Monetary Incentive, and 3 were coded as Both / None (see Table 4). To test H1 and H2, we ran chi-square tests to
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investigate the likelihood of the participant reporting that they preferred Reciprocity versus Monetary Incentive help requests, Reciprocity versus Both / None requests, and Monetary Incentive versus Both / None requests. Participants were more likely to indicate Reciprocity requests than Monetary Incentive requests ($X^2=10.66, p = .00$); they were also more likely to indicate Reciprocity requests than Both / None requests ($X^2=5.69, p = .01$). There was no statistically significant difference between indicating Monetary Incentive requests and Both/None requests ($X^2=1.09, p = .30$). Hence, our results support the second of our competing hypotheses (H2) that reciprocity is more likely to be effective when compared to monetary incentives for entrepreneurs who are eliciting network contacts’ cooperation to reach a seed-round investor.

---Insert Figure 2 and Table 4 here---

**DISCUSSION**

In Study 1 we find that entrepreneurs’ communication strategies that emphasized reciprocity were significantly more likely to elicit a network contact’s cooperation when compared to a communication strategy that emphasized monetary incentives. The cooperation in Study 1 involved the network contact (referee) forwarding the venture pitch deck to the targeted seed-round investor in ways that lead to the investor successfully accepting the email request and hence agreeing to a one-on-one pitching session by the referred entrepreneur. Because a focal entrepreneur’s network contacts were randomly assigned to a specific communication strategy, Study 1 results suggest that the observed effects are causal in nature. In Study 2, we dig deeper to understand the motivations underlying network contacts’ actions in rendering assistance to the entrepreneur. Our within-in subject design provides evidence that individuals acting as network intermediaries during an entrepreneurs’ social search for financial resources find it more appropriate to cooperate when the entrepreneur frames her request in ways that highlight
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reciprocity rather than highlighting monetary incentives that could accrue to the network intermediary. The free-text response data asking subjects to provide reasons for their evaluation of appropriateness of the request for help provides evidence on two issues. First, subjects construe the interaction as a social one, as opposed to a non-social null interaction (Fiske, 1991). Second, subjects are significantly more likely to construe the interaction as one involving equality matching (Fiske, 1991), with its attendant expectations of reciprocity rather than market pricing (Fiske, 1991) with its attendant requirement of monetary incentives and returns. Taken together, the findings from these two studies paint a picture where network contacts’ cooperation is contingent on how the request for assistance is communicated; requests for assistance couched in terms of appeals to reciprocity are more likely to be heeded than requests couched in terms of potential monetary benefits that could accrue to the network contact.

Drawing on Fiske’s (1991) elementary relations model (market pricing, authority ranking, equality matching and communal sharing), we identified these two relevant interaction models that could operate in the context of entrepreneurs engaging in social search for financial resources. Specifically, we argued that communication strategies that highlight appeals to reciprocity would lead network contacts to construe the interaction in terms of equality matching or communal sharing; in contrast, communication strategies that highlight monetary incentives would lead network contacts to construe the interaction in terms of market pricing. Because of lack of prior work, we were unable to advance a clear theoretical prediction on which of these pathways would be more effective in terms of the entrepreneur gaining access to seed-round investors. But as our data suggest, empirically, it appears that appealing to reciprocity is more effective than monetary incentives in eliciting network contacts’ cooperation to ‘open the door’ for valuable financial resources. Our data are drawn from small samples (study 1 was from 648 triads involving 14 entrepreneurs while study 2 was from 21 subjects). However, we note that
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despite the small sample size, randomization coupled with sampling from quite different
populations (study 1 involved entrepreneurs and intermediaries in India while study 2 subjects
were entrepreneurs and business owners in Singapore) provides strong internal validity to our
design and suggests these effects are likely practically significant. Nevertheless, we acknowledge
that more research is needed to replicate these findings and to document the precise micro-
mechanisms behind our findings.

Notwithstanding the limitations of our study, we extend the literature on entrepreneurial
networks and resource mobilization in two important ways. First, our work highlights the fact
that having a strong personal network, where strength of the network is defined in terms of
network structure (such as network size, density etc.) or in terms of network quality (such as
proportion of strong ties etc.), is not enough. Knowing how to activate network connections
effectively in order to secure resources is also important. Prior work by Baron and Markman
(2003) theorized that entrepreneurs’ social competence, which refers to their ability to interact
effectively with others based on discrete social skills, is an important driver of entrepreneurs’
success in securing resources. Likewise, Zott and Huy (2007) provide rich qualitative evidence
that entrepreneurs that are skilled in using symbolic actions signaling their quality are more
effective in resource mobilization. While these studies have shed useful light on interactions
between entrepreneurs and resource-holders, we know little about how entrepreneurs activate
their network contacts to act as intermediaries and thus access those valued resource-holders in
the first place. Our main-effect results that reciprocity-priming communication strategies which
make dyadic or generalized reciprocity salient in the minds of network contacts is much more
likely to elicit cooperation when compared to monetary rewards-priming approaches. This broad-
brush finding suggests avenues for future work that examine whether there are important social
structural contingencies that may moderate this main effect. For example, it is plausible that
monetary incentives could be effective for weak ties whereas reciprocity is much more effective for strong ties. Because our results involved randomization of treatment condition within a focal entrepreneur’s set of elicited network contacts, we are unable to shed light on this issue.

Our second contribution is to redirect entrepreneurial networks research towards more of a process perspective. Prior work in this domain emphasized network structure and quality, treating it as endowments that entrepreneurs could do little to alter. More recent research (e.g. Hallen & Eisenhardt, 2012; Vissa, 2012) has moved away from this largely structural perspective to highlight agentic actions that entrepreneurs take to manage their personal networks so as to make it more effective to pursue their instrumental goals. We add to this agentic view by addressing the challenge of how entrepreneurs can craft communication strategies that increase the odds of network contacts rendering assistance when requested. A process perspective on entrepreneurial networks would extend the agentic view by shedding light on when and how entrepreneurs activate, re-activate, deactivate or keep latent personal network ties over time. Overall, our study helps to advance a process perspective on entrepreneurial networks to explore how networks contribute to (or may even detract from) resource mobilization, which is arguably at least as important a process as opportunity identification for entrepreneurship scholars.
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Figure 1: Flowchart illustrating the procedure for coding network triads in Study 1
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Figure 2: Number of Referral Requests Preferred by Network Contact (by condition) in Study 2
Table 1: Mean and Descriptive Statistics (by Condition) in Study 1

<table>
<thead>
<tr>
<th></th>
<th>Monetary Incentive</th>
<th>Reciprocity</th>
<th>Baseline</th>
<th>Hybrid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Closeness</td>
<td>3.6</td>
<td>1.9</td>
<td>4.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Years known</td>
<td>3.9</td>
<td>5.7</td>
<td>5.0</td>
<td>6.8</td>
</tr>
<tr>
<td>Prob. Success</td>
<td>49.9</td>
<td>31.4</td>
<td>59.5</td>
<td>30.1</td>
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</table>

Table 2: Test of Differences by Condition (p-values) in Study 1

Panel A

<table>
<thead>
<tr>
<th></th>
<th>Monetary Incentive</th>
<th>Reciprocity</th>
<th>Baseline</th>
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</thead>
<tbody>
<tr>
<td>Closeness</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocity</td>
<td>0.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>0.91</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Hybrid</td>
<td>0.35</td>
<td>0.75</td>
<td>0.4</td>
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Panel B

<table>
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<th>Baseline</th>
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<td>Years known</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocity</td>
<td>0.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>0.99</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Hybrid</td>
<td>0.6</td>
<td>0.85</td>
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Panel C

<table>
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<th>Baseline</th>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocity</td>
<td>0.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>0.33</td>
<td>0.01</td>
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<tr>
<td>Hybrid</td>
<td>0.81</td>
<td>0.26</td>
<td>0.18</td>
</tr>
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</table>
Table 3: Fixed Effects Logit Estimation of Probability of Reaching a VC Investor (Study 1)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reached Investor (Yes=1, No=0)</th>
<th>( \chi^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reciprocity</td>
<td>1.17 (0.69), [.089]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>0.17 (0.78), [.831]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hybrid</td>
<td>-0.04 (0.83), [.965]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chi2</td>
<td>5.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-60.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>456</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses; p-values in brackets; (192 obs. dropped because all either positive or negative within the fixed effects)

Table 4: Comparison of Referral Requests Preferred by Network Contact (by condition) in Study 2

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number chosen</th>
<th>( \chi^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reciprocite (a)</td>
<td>13</td>
<td>10.66</td>
<td>.001</td>
</tr>
<tr>
<td>Monetary Incentive (b)</td>
<td>5</td>
<td>5.69</td>
<td>.017</td>
</tr>
<tr>
<td>Both / None (c)</td>
<td>3</td>
<td>1.09</td>
<td>.296</td>
</tr>
</tbody>
</table>

(a) (b)  
(a) (c)  
(b) (c)
Some Ground Rules for the Find the Funder Contest

- Successfully reaching investors means – Investor opens the email and looks at the pitch deck! They will open emails with attachments only from a person they know well and trust.
- The panel of four investors committed to listening to a 20 minute pitch (via Skype) from *all* teams that successfully reach them.
- Teams should **NOT** reach the investors directly *unless* they already know them well. Instead, teams asked to think of whom they would approach who may be able to successfully forward pitch deck to the investors or who can forward it to someone that in turn can forward it to the investors etc.
- Contest closes 7 days after kick-off event.
- Prize money of up to Rs. 50,000 for the fastest team to reach all four investors.

Task List for the founding teams

- **First task:** Individual contact list
  - List 12 network contacts who can help your team to potentially get your pitch deck to the investors.
  - 20 minutes for the task; can search online; but cannot consult other team members.
- **Second task:** Team contact list
  - Come together as a team and generate a final list of 12 network contacts.
  - 20 minutes for the task; can search online.
- **Third task:** Sending out emails to the contacts you list.
  - Team send out emails (with link to team’s pitch deck) to the final list of 12 contacts in an order determined by research team.

Common Text in Templated Email from Entrepreneurs to Network Contacts (investor names and companies hidden for privacy issues)

Dear <abc>

Trust all well with you! We - <start-up name> - are writing with a request.

We are participating in a ‘Find a Funder’ contest organized by T-Hub. It is possible that you may receive multiple emails about this from other contacts of yours or other start-up teams - this just shows how popular you are😊!! As part of this contest, we are trying to send a pitch deck about our venture to the panel of 4 eminent investors below:

1) XXXXX, Co-founder - YYYY and Angel Investor, based out of Mumbai, India
2) XXXXX, Managing Partner - YYYY, based out of Singapore
3) XXXXX, Venture Capitalist based out of Bangalore, India
4) XXXXX - Co-founder YYYY and Angel Investor based out of Gurgaon, India

These investors have committed to listening to our venture pitch if our pitch deck reaches them through a person they know and trust before the deadline of 12th September 2016 @ 6 pm IST.

Our team also stands to win prize money of up to Rs. 50,000 if we are the fastest at reaching all the investors.
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APPENDIX 2
Portion of Templated Email Text from Entrepreneur to Network Contact (Referee) that Represents the Experimental Manipulation of Four Conditions (Study 1)

**Message type A (Monetary Incentives)**
*You* stand to win prize money too. If you know any of the above investors well, and if you forward our pitch deck to them *faster than others*, you will win Rs 10,000. Also, the person who invited you will win Rs 5,000; likewise the person who invited your inviter will win Rs 2,500; the person who invited your inviter’s inviter will win Rs 1,250. Even if you don’t know an investor, your contacts might. Therefore, by forwarding our request to any of your contacts that you believe would be able to reach the investors successfully, you and your contacts will win.

**Message type B (Reciprocity)**
Please note that *you* now have a golden opportunity to give back to the entrepreneurial eco-system in India and [earn our heartfelt gratitude](#) if you could help us reach our pitch deck to the above panel of investors. If you know any of the above investors well, you could help us immensely by directly forwarding our request to them. Even if you don’t know an investor, your contacts might. Therefore, you could also help us immensely by forwarding our request to any of your contacts that you believe would be able to reach the investors successfully.

**Message type C (Baseline)**
As you may well know, entrepreneurs like us often have to use our personal networks in order to mobilize valuable resources for the new venture we are building. This is the context in which we are reaching out to you. You can successfully forward our teams pitch deck link directly to a panelist(s) if you know the panelists well. You could send our team’s pitch deck link indirectly, i.e., to anyone whom you know well and trust, that in turn can successfully pass on the pitch deck to the panelists.

**Message type D (Hybrid of Monetary Incentive and Reciprocity)**
*You* have a golden opportunity to give back to the entrepreneurial eco-system, [earn our heartfelt gratitude](#) and [win prize money](#) by helping us. If you know any of the above investors well, and if you forward our pitch deck to them *faster than others*, you will win Rs 10,000! Also, the person who invited you will win Rs 5,000; likewise the person who invited your inviter will win Rs 2,500; the person who invited your inviter’s inviter will win Rs 1,250. Even if you don’t know an investor, your contacts might. Therefore, you can help us immensely by forwarding our request to one of your contacts, and you and your contacts will win too.
APPENDIX 3
Stimulus to Subjects in Study 2

Imagine that you were checking your mail and you noticed two emails from Kris and Jackie. You got to know Kris and Jackie some time ago at an entrepreneurship event. You chatted with them about entrepreneurship in general, exchanged contact information, and offered to stay in touch.

In Kris's email and Jackie's email, they mentioned that they have incorporated their own companies last month, and are both seeking funding from potential investors to grow their business ideas.

Kris and Jackie reached out to you separately and asked if you could help connect them with potential investors. In the emails, both Kris and Jackie attached their respective pitch decks that explain their business ideas. Kris and Jackie asked you to forward their pitch decks to people you know who might be able to connect with potential investors.

Both Kris and Jackie have similar requests, except that:

-Kris mentioned that you will be paid, IF any potential investors agree to read the pitch deck.

-Jackie will be very grateful for your help and hope to reciprocate your favor in future.

(Note: Kris and Jackie run their own companies and reached out to you separately; they are not co-owners).