The London School of Economics and Political Science

Innovation's network(ing) antecedents: team- and individual-level investigations and propositions

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Declaration

I certify that the thesis I have presented for examination for the MPhil/PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).

I warrant that this authorisation does not, to the best of my belief, infringe the rights of any third party.

I declare that my thesis consists of 41,234 words.

Statement of conjoint work

I confirm that Chapter 2 was jointly co-authored with Professor Harry Barkema, Dr Fei Qin, Dr Daan Stam, and Mr Jaco Smit and I contributed 40% of this work.

Table of Contents

Abstract

The aim of my thesis is to investigate the role interpersonal networks play in determining innovation outcomes, and the antecedents of individual behaviour in networks by "players" in the innovation game. These investigations—two qualitative studies and a detailed, highly developed conceptual framework—give rise to a number of propositions that may serve as a foundation for greater understanding and which make a range of novel contributions to the literature on networks and innovation management.

Too little is understood about social networks and their impact on innovation. As the world of business continues its move away from bureaucratic hierarchies to projectified network organisations, from integrated monoliths to modular specialists, the importance of such an understanding grows. Innovation has always taken place in the context of embedded ties—its prospective nature does not normally sit well with a depersonalised, arms-length, market-based approach. Yet our understanding of the intersection of individuals' and teams' networks (and networking) with their ability to succeed in innovative action is limited. There are various trajectories within both the innovation management literature and the networks literature which take on the challenge, but often the theoretical roots on which they draw are planted in old forms of organisation and this limits the speed of their advance in delivering understanding of the new realities in bringing innovations to market. Hence, this thesis uses qualitative methods and conceptual models to propose new contributions to these fields.

The principal contributions of this thesis are:

- A new perspective and theoretical offering concerning how innovation teams can succeed, synthesising boundary-spanning with Burt's models of brokerage, and Obstfeld's *tertius iungens.*
- A team- and leader-based model of the characteristics needed over the stages of business model innovation.
- A fresh perspective on how agents (specifically venture capitalists) select and pursue networking strategies to "hunt" or "harvest" opportunities.

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And finally, my wife, Lucie, and our sons, Theo and Alex. A better team I could not imagine.

CHAPTER 1: Motivation, a brief theoretical background and summaries of the three studies

The three studies, which make up this thesis are united by:

1. an interest in the evolution and dynamics of social, organisational and economic networks at the level of the individual and the team
2. an interest in the interaction of the network with innovation outcomes
3. behavioural, and to a lesser extent cognitive, perspectives on mechanisms of action
4. qualitative and exploratory method and propositional logic

The four themes interweave to create some interesting contributions.

The first theme is of interest to scholars, and especially organization theorists, because in many aspects of its activities the world is moving away from organising through hierarchies and pure market mechanisms to organising through networks; in other aspects it is recognising that networks have always influenced the outcomes of what otherwise appeared as hierarchies and markets. The network analysis of the 20th century, driven by its disciplinary roots, methodological tools, and structuralist focus was often static or comparative-static in its outputs—while even such an approach yielded valuable insights, new models (and new methods) must be developed to give practitioners and a new generation of scholars insights into the processes and mechanisms by which structural constraints and strategic action interplay to generate interesting theory and useful practical wisdom.

It could perhaps also be noted that the network perspective is a useful tool for understanding one of the most pressing challenges for organisations and economies: how systems and incentives can be designed or managed for pro-social outcomes. The efficiency of the market invites bad actors to use its anonymity to create asymmetries and to take advantage of externalities; the strong form of co-ordination in the hierarchy creates and entrenches power, which corrupts. The network as an organising principle steers a middle course between these two extremes and provides potential for adaptation and reconfiguration without (or with less) anonymity and coordination without (or with less) corruption. There are of course dark and corrupt networks—but an understanding of network dynamics and evolution is an important asset for a world in need of ways to respond to turbulence and change.

The second theme is of interest both because of the general and well-understood importance of innovation and because innovation represents the "ideal type" of challenge to be undertaken through networks. The right network configurations are necessary to scan for novelty and novel potential, to recombine that novelty, to gain initial adopters of an innovation, and to diffuse the innovation across other domains where it will be useful. Markets are of some use for the first and fourth of these challenges but of little significance for the second and third; hierarchies are famously poor at fostering innovations which challenge their dominant logic. While some network theorists point to the embeddedness of networks as retarding innovation, the perspective, for the most part, of this work is that we must embrace, understand and build theory about embeddedness in order to take advantage of it to solve problems and meet challenges. (Across the

three studies, while the construct of embeddedness is occasionally touched upon, it is not central to the work. I believe it to be an underspecified and overly vague way of considering the range of relational and structural issues that characterise network relations. After a long search for alternative constructs and extended debate, it is used in the propositions of the second, conceptual study, but the search continues for better specified ways to frame the subject of non-economic tie content.)

The third theme is significant for developing our understanding of networks, because the most common and famous critique of the network perspective is that, like all structuralist perspectives, it lacks appreciation of agency. Behavioural (and cognitive) perspectives on action in networks are vital to help us begin to remedy that gap.

The fourth of these themes, that of qualitative and exploratory research, resulting in testable propositions, is apropos to the other three, because the three themes have in common that scholars' investigation of them is at an early stage and so the textured, situated and (it is to be hoped) nuanced findings of qualitative research can light the way to provide avenues of interest and impact for colleagues to pursue. While some theorists of theory argue that propositions are not necessarily the ideal outcome of theorising, as they are reductive and don't spring from a fully "joined up" theory, they are appropriate in this case: the first and third studies presented in this dissertation are exploratory and the propositions, while related to each other, do not try to form a full answer, a "theory" of their respective research questions.

The three studies are:

Chapter 2: a study of value proposition innovation teams. The fieldwork (extensive interviews and non-participant observation) was undertaken during 2008-2009 and I entered the field fresh from my MSc Org and Social Psych, less than two months after beginning PhD studies. The major contributions of this study are propositions, drawing on the seminal work of Ancona and Caldwell on boundary-spanning, about how innovation teams circumvent blocks to their progress in developing innovations and what team network characteristics lead to innovation success. Chapter 3 includes some retrospective consideration of the limitations of this study, some of which are due to entering the field, in the arguably too-purist spirit of grounded theory, with little theoretical grounding.

Chapter 4: A conceptual paper with four other authors, positing a fully dynamic stage model on the team characteristics of business model innovation success. As noted above, hierarchies are very poor at driving radical innovation or any innovation counter to the dominant logic of the "host" organisation—this paper proposes how this handicap can best be overcome. There are two, intertwined, theoretical lenses in this paper—one on networks and the other on leadership. Dr Daan Stam and Mr Jaco Smit took responsibility for the leadership thread, I, with the help of some brief conversations and email exchanges with Dr Fei Qin, and drawing heavily on the fieldwork experience that informed the first study outlined above, executed the networks thread, and Professor Harry Barkema led a process (to which all co-authors contributed equally) of, over a four year

period, redesigning and refining the model and eventually of framing it. The paper was rejected by the Academy of Management Review and I have edited it somewhat for inclusion in the present work—there is a parallel process of editing going on among all the co-authors in preparation for submission to another journal, but that is a different 'fork in the road' than the study included here.

The principal contributions of this study are propositions about the network characteristics helpful for teams' business model innovation success and how these change over the lifetime of an innovation project.

Chapter 5: a study of venture capitalist networking strategies. I was fortunate, through my brother-in-law (a former corporate lawyer and now an LSE PhD student) to gain remarkable access to a range of prominent London VCs and through them to the London VC community. This has enabled me to conduct (through fieldwork in 2012-2013) an in-depth qualitative investigation into the networking strategies of VCs and to generate grounded theory regarding the mechanisms of their selection and implementation of networking strategies. The area of individual-level choices about why, how and with whom to "network" is almost an entirely blank area in the literature, and the resulting propositions, though well-grounded in the data, are somewhat diverse and could potentially spawn multiple papers. In the short run, this work is being refined with the help of my new colleagues in the Management Science and Innovation department at University College London, for submission to Organization Science this autumn.

Over the course of this thesis I will examine the following questions/sub-questions:

How can firms use boundary-spanning, co-ordinating teams to support successful innovations? Can a team create or exploit bridging ties more effectively than an individual and if so, how? Can a team diffuse the 'blocking power' of gatekeepers and if so, how?

Which types of social networks and leadership styles contribute to Business Model Innovation performance? How does this differ across the concept and development stage of BMI? How do BMI team characteristics in the concept stage influence those same variables – and ultimately BMI performance – in the development stage?

How do venture capital partners and associates employed by firms of variable status, allocate time between different ties and different categories of ties, selecting whether to "hunt" for new ties or to "nurture" or "harvest" the existing ones? How do they decide upon particular alters as potentially fruitful connections? How do they approach new prospective alters: what tactics are selected for forming relationships? What efforts are made to influence or determine the basis (e.g., social, quasi-social, transactional, multiplex) of the relationship? How do they select the desired content and affect of their communications with their ongoing alters? How do they take the time horizon

of their activities (the cycle speed of the types of transactions they conduct) as a guide to appropriate action?

Chapter 6 summarises and discusses the findings and the contribution of the thesis, and proposes trajectories for further research in these domains.

CHAPTER 2: Unveiling innovation team microfoundations: boundary spanning, brokerage and blockages

INTRODUCTION

Innovation team performance is argued to hang on a balance of diverse extra-workgroup ties and internal cohesion (Reagans et al, 2004; Oh et al, 2006). Essential collaboration, characterised by "trust, fine-grained [identity-based] information transfer and joint problem-solving arrangements", (Uzzi, 1996) can take place within dense clusters, while the existence of clique-cross-cutting ties enables access to fresh perspectives and the information needed to spark and develop new approaches to problems. Such boundary-spanning (Ancona and Caldwell, 1992) is believed particularly vital to innovation processes, allowing workgroups to gain information, marshal resources and build legitimacy for the innovations they attempt to shepherd through their organisation.

However, the mechanisms by which this desirable diversity of ties translates into effective innovation are not fully understood or well specified. In recent years, a number of authors have proposed network mechanisms that may be at work in team boundary-spanning (e.g., Borgatti and Cross (2003), Burt (2000)). Prominent among these network perspectives, small world network theorists (Uzzi and Spiro 2005, Verspagen and Duysters 2002, Schilling and Phelps 2007) showed small world structures to be conducive to innovation. This gave rise to a straightforward implication for practice (derived from small world theory's founding principle, 'random rewiring'): that the addition of a cosmopolitan node or two to a cluster, bringing some structural hole-spanning ties with them, might

enable a situation where fresh information could easily (Dodds Muhamad and Watts, 2003) be sought, by a strategizing would-be innovator (Cowan and Jonard 2003), through the network.

This rather stimulating and intuitively valid suggestion has been rejected in several dimensions by more recent studies. Reagans and Zuckerman (2008a) argue that such structural hole-spanning nodes in a (by definition, stratified) small world network, able to act as brokers (or tastemakers at least, cf Powell et al 2005), are as likely to block as to facilitate, and ensure that knowledge is distributed "unequally", and to their own benefit. Fleming and Marx (2006) likewise argue that an important task of innovation managers in small worlds is to 'harness' the unpredictable power of the "gatekeepers" who, as they provide the innovators' 'window to the world', may extract rents or otherwise deflect their system from productive ends. Reagans and Zuckerman (2008b), building on Centola and Macy (2007), note the significance of bandwidth to the transmission of complex information and that some types of knowledge will only be accepted by network actors when confirmed by more than one source. Given these complications, the seeming path-shortening benefit of brokerage is undermined: highly connected nodes may not have the bandwidth (even when there is an apparent rent-seeking opportunity) to transmit complex knowledge through the network and, if there must be two routes between nodes in order that transmission take place, the "path length benefits" arising from random rewiring between caves are significantly dented. Cowan and Jonard (2004) make the same point, though from the perspective of actors' ability to absorb knowledge rather than the complexity of the knowledge diffusing through the

network: when ability to absorb knowledge is high, small world benefits are at their minimum level. Singh, Hansen and Podolny (2009) highlight the barrier that out-group status presents to the smooth operation of an information-sharing network. Even before the rise of interest in the "small world", sticky network phenomena such as homophily, preferential attachment (Barabási and Albert 1999), the psychological constraints of embeddedness (Kogut and Walker 2001), the pre-judged "problemistic search" (Cyert and March 1963), "control partnering" (Baum Shipilov and Rowley 2003) by influential nodes attempting to maintain control of their own network neighbourhoods, and a preference for the transaction cost efficiencies of confining search to local ties (Jackson and Rogers 1995) made it difficult to credit a straightforward relationship between theoretical access to information and its actual transmission.

Fleming King and Juda (2007) offer an intriguing speculation: they propose that the sheer volume and diversity of information within the whole of a network component—in other words, its potential information-sharing capacity—may offer more predictive power for innovation-critical information transfer than does an understanding of the path length to that information.

Given this multiplicity of reasons for a network to fail to allow generative information transfer, what *is* driving innovation success? Ancona and Caldwell's conception of the innovation process proposes that important aspects of the boundary-spanning activities needed by a successful workgroup are fundamentally political and strategic. In their much-cited typology of boundary spanning (1992), innovation workgroups engage in four primary sorts of

external activity: two of these, scouting (for information) and task co-ordination (marshalling resources) comprise the explicit task of the workgroup; on the other hand, ambassadorial activity (influencing, typically upward-directed) and guarding (boundary protection or filtering against both 'management interference' and the quasi-competitive actions of other innovation workgroups), relate to an implicit task with a less formal dimension: carving out the organisational 'turf' (Anand, Gardner and Morris 2007) into which the innovation can put down roots. Innovation process models, such as those of Burgelman (1983a) and Van de Ven et al (1999), similarly assign considerable weight to the interdependence of legitimacy-building with resource-gathering. Yet most studies of boundary spanning focus on the formal (and more easily susceptible to analytic technique) side of generative information sharing: for example, exploration and search (e.g., Rosenkopf and Nerkar 2001), knowledge-sharing (e.g., Hansen 1999), and the process of translating knowledge from one context into another (e.g., Carlile 2004).

Furthermore, the innovation process is often tortuous. It is well known (March 1991) that actions and contingencies that in one particular phase support successful innovation may prove counterproductive at another. Similarly, roles and tie characteristics which are important at one stage in the process may be of less help at another: for example, Fleming and Marx (2006b) suggest that brokers may be able to access novel information and generate novel ideas, but not necessarily develop and diffuse them. By seeking an understanding of the innovation process from end to end, we may avoid recommendations for

practice based on an atomised understanding, which inadvertently serve only to undermine the success of the process as a whole.

This study, a longitudinal qualitative examination in a large telecoms firm of a value proposition innovation process, managed by a workgroup explicitly set the task of boundary-spanning, attempts to investigate micro-foundations of innovation team behaviour as a step towards remedying these deficits. By examining the entire process from idea generation through launch, and by bringing in the perspective of recent advances in network theory, we seek to generate testable theoretical propositions as to how, and under what conditions, boundary-spanning workgroups support successful innovations.

This study will examine how tie characteristics (such as tie relational embeddedness, tie affect, tie mutual affiliation, tie formal and power relations and tie bandwidth) and boundary-spanning activities change over the course of the innovation process. It examines how workgroups create or exploit ties for scouting, task co-ordinating, ambassadorial and guarding activities. It considers how tie characteristics relate to success in boundary-spanning activities and thence to success in innovation.

Investigating and synthesising the brokerage and boundary-spanning perspective (i.e., the use of ego-centred networks and their role in facilitating innovation), the individual's accumulation of and use of social capital (the parallel process whereby innovation is driven by and facilitates status and "career" ambitions beyond the success or failure of a particular innovation), and

the role of network structure surrounding an individual or team in allowing an innovation to flourish or stagnate, provides an opportunity to develop theory about how networks can be constructed to support innovation.

One important focus for this study is occurrences of 'blocks' to a workgroup's progress. Innovations arising within a corporate setting must almost always circumvent blocks to their progress if they are to find the information, accumulate the resources and be accorded the legitimacy needed to mature into a place within the portfolio of the firm's activities, benefit from sustained market effort and the chance of long-term market acceptance, in turn leading to a place at the top table of the corporation's efforts. Such obstacles arise from an inability to access needed, or appropriate, information, financial or physical resources or needed permissions. The inability may derive from time or cognitive constraints, or from other firm actors' opposition or indifference to the innovation and to its potential effects on the firm's activities.

Recognising both the need to innovate and the increasing benefits of rapid innovation, organisations can lubricate an innovation's journey through some of its phases and eliminate obstacles. A permissive and pro-innovation firm culture, well-managed ideation, protection of nascent innovations from metrics and filters developed to judge less novel activities, or providing slack on which immature value propositions or ventures may temporarily feed, may all allow an innovation to flourish for a time. Eventually, however, nearly all innovations that are not to die or exit the organisation must shoulder aside, or slip through, the barriers presented by the firm's incumbent operations.

When a workgroup is prevented from reaching the next milestone in the development of the innovation for which it is responsible, it is a reflexive, interruptive moment (Okhuysen and Eisenhardt 2002, Zellmer-Bruhn 2003) and as we will see, it often creates an inflection in the workgroup's pattern of network activity and its tie characteristics. The workgroup's ability to surmount such obstacles depends heavily on its ability to access ties: ties to information contradicting an objection, or satisfying a request for assurance; ties to holders of permissions and resources; ties to management figures able to confer legitimacy on the project. How and when, then, are innovation workgroups "blocked" and how do they then circumvent those blocks or fail to do so?

I selected a research site in which a boundary-spanning workgroup was engaging in a variety of scouting, ambassadorial, co-ordinating and guarding activities (Ancona and Caldwell, 1992) to support innovation efforts. This site, with its high volume of innovation efforts in a relatively short period of time, also provides a case where the phenomenon of interest appears with substantial intensity, and features high levels of variation among innovation proposals that were considered but not launched, those that were launched and have failed, and those that launched with some success.

The underlying logic of the research is to develop testable theoretical propositions, and its principal results are insights regarding the intersection between team composition (leadership and the leader's roots in the organisation), team ties, and time pacing. The findings are supportive, if not

definitively so, of Fleming, King and Juda's speculation that the as-yet-untapped potential within a network component to build new ties may be as important, for those who seek to understand innovation, as the existing pattern of ties.

While I believe the insights themselves make a contribution to innovation management theory, the most significant contribution of the study is to propose a "way of seeing" the interaction between ties, team composition and time.

Next, I describe the setting. Then I discuss the qualitative method selected for this study. I describe the findings and the analysis of those findings, explain the insights derived from the analysis and put forward a set of propositions. In conclusion, I connect these propositions to the broader effort to develop theory.

SETTING AND METHOD

I studied an ad hoc cross-functional workgroup created to develop rapidly a series of new value propositions for UK public sector clients within a large multinational telecommunications firm.

Between May 2008 and April 2009 the workgroup, in two 'waves', reviewed 66 proposals and from among these launched 13 new value propositions. These made use almost entirely of tested technologies, though combining them in more-or-less novel ways and with particular attention to the marketing and contractual/pricing components of these new offers.

While my study, which includes both real-time observations from November 2008 to April 2009, and retrospective qualitative data, followed the workgroup and its work as a whole, the 13 value propositions (and the 53 other proposals reviewed by the workgroup and not brought to launch) provided multiple case studies, permitting a replication logic (Yin, 1984) and an opportunity to consider individual cases as a series of independent experiments. I followed a theory-based sampling strategy: the study's purpose was to reappraise and build theory on the end-to-end holistic process of innovation, and to contribute to our understanding of network theory in interaction with innovation efforts.

Operationalising success is challenging when examining innovation practice. Failure may be the ground and success the figure, but tight definitions of success are elusive. Ultimately, the purpose of innovation is to improve a firm's competitive position and its ability to generate above-normal returns: to consider the contribution a launched innovation makes to this aim, we may consider its novelty, market potential and profitability. For those innovations that are not launched, it is convenient to assume that where a proposal is rejected only at the last stage gate prior to launch, it is a more "successful" proposal than one which is rejected at the first stage of assessment. Yet this too is problematic: if an innovation process is set up in a way that rejects truly novel proposals, preferring the apparently low-risk 'me too' imitation of competitor offerings, or the proposal with the heavyweight sponsor, then identifying 'last stage gate reached before rejection' may tell us less about the merits of the proposal than we might like. (Indeed, a successful innovation process may, in part, be one that rejects inadequate ideas at the earliest stage rather than the

latest one.) Thus, though we examine the launched value proposition proposals on a variety of dimensions, such as immediate sales, profit margins achieved, novelty and market potential, and the unlaunched proposals on their progress through the innovation pipeline, these are imperfect measures.

Timeline:

2008

May: group formed for Rapidstart 1, 25 members

May-June: 40 proposals reviewed, 6 chosen for immediate launch

July: launch of 6 value propositions

September: success in meeting original in-year 'extra margin' target declared, launch of 2 further propositions. Original management sponsor of process promoted. Process relaunched as Rapidstart 2, in a new, less time-constrained format, with the core group reconfigured to 8 people

October-December: 58 proposals reviewed (many of them carried over from previous review), eight chosen for Rapidstart 2 launch

2009

April: five of the eight Rapidstart 2 proposals launched

May: 25% reduction in head count across the firm announced; group reconfigured and reduced to three people, review of its purpose undertaken

Figure 1 shows a brief typology of the 66 proposals.

Figure 1:

Cases	Proposed RS1	Launched RS1 (Succeeded/Failed)	Proposed RS2	Launched RS2 (Succeeded/Failed)	Interview Data	Archival Data
8	X	4/4			Yes	Yes
32	X		X		Some	Yes
2	X		X	0/2	Yes	Yes
3			X	0/3	Yes	Yes
21			X		Some	Yes

DATA COLLECTION

My aim was to understand how the innovation process was influenced by the network connections of the actors in the process. I collected data through interviews, questionnaires, non-participant observation and archival sources such as emails, meeting minutes and presentation packs (such as presentations by proposal champions and subgroups of the overall working group) and internally- and externally-focused marketing materials.

I relied on 68 semistructured interviews of between 45 and 90 minutes with 41 individual managers as the main source of data on the innovation process and the accompanying changes in network connections. I interviewed 20 of the 25 core workgroup members, who came principally from other pre-existing teams within the Strategy directorate of the division, and using a snowball technique for selection, interviewed managers and sales executives outside the group who

had been responsible for initiating or championing a variety of proposals for new value propositions, including all of the 13 propositions that were eventually selected for launch. Many managers were interviewed several times as the project progressed and they took on new responsibilities in respect of particular value propositions or proposals; these reiterations assisted in uncovering the dynamics at work. Over a five month period, I also attended four half-day and three all-day meetings, as well as six 60-minute to half-day conference calls, as a non-participant observer, where I made notes and recorded impressions of the interactions. I also participated with the group in coffee breaks and lunches and at one of the launch events for the second wave of propositions.

The interview protocol evolved in two phases. Initially, I asked managers to walk me through the processes being followed and the experiences so far in the project and asked probing questions to establish detail. After I was oriented, I created a further interview guide to create case histories and timelines of the propositions that had been launched and to uncover network connections of the interviewee and how these had changed over the life of the project.

Among the archival data collected were financial data (sales and profit margin) on the first eight months of sales for the first eight value propositions to be launched, and on the sales targets 'signed up to' by the sector vertical sales teams for the second wave, of five propositions, to be launched.

DATA ANALYSIS

A sequential data analysis (Miles and Huberman 1984) began with writing case stories (Eisenhardt 1989) for each innovation and its associated team. All data were entered into chronological charts, assigning dates to each known activity, output, and change in group structure or connection. The stories were then open coded, grouping conditions, interactions, decision points, activities, outputs/consequences, and patterns of network connections under a total of 32 themes, these themes including the 15 types of boundary-spanning activities identified by Ancona and Caldwell. I then created one-page overviews of the charts that allowed easier cross-case analysis while still being able to note important themes, sequences and changes in the data.

I then carried out cross-case analysis. I used the chronological charts and overviews I had created to analyse the data in several ways, reviewing key similarities and differences between the cases, grouping them in families (Miles and Huberman, 1984), comparing cases on continuous measurement scales and using 2x2 and other matrices to compare and identify similarities and differences (Eisenhardt, 1989). I noted common patterns and propositions that emerged, relating to correspondences between boundary spanning activities and innovation success. I considered several instances of "discrepant" patterns in order to test the validity of the emerging findings. Finally, I returned to the literature, in order to compare the patterns that I had noted with existing evidence and theory.

FINDINGS

In Philoctetes, a Fortune 250 ICT firm, a challenge was identified in May 2008, within the public sector market division, to create a pipeline of rapid-payoff, high margin value proposition innovations. A boundary-spanning workgroup, made up of 25 senior members of the division's Strategy Directorate, was put into place to gather ideas for new value propositions and bring as many as possible of them to launch in six weeks. While many of the individuals had some cross-functional experience, nearly all spontaneously identified themselves at interview as, prior to their involvement in the strategy directorate, having roots in either a marketing/business development context or a 'product line' (engineering) context, and of those interviewed who did not volunteer this information spontaneously (five), just one declined to categorise herself, claiming roots in both camps within the business.

Two justifications were regularly mentioned by workgroup members for the initiative: firstly, that the company had to navigate between two types of eroding margins: a Scylla of large custom projects which frequently underperformed against their financial targets, and a Charybdis of commoditised legacy 'wholesale' products ("lines and minutes"); secondly, that this ongoing problem was thrown into high relief because the company's business services division faced an accounting period where a large loss was to be recognised from a long-running and problematic contract with the UK government, severely damaging the company's overall financial performance.

Therefore, the workgroup had been assembled on an 'emergency' basis and tasked to identify 'low hanging fruit': value propositions that could be launched rapidly and would have a positive impact within the current accounting period. During this initial phase (RapidStart, or RS1) of the project, processes were developed somewhat *ad hoc.* However, they were largely based upon procedures already in place for the evaluation and development of new value propositions, with the difference that the compressed timeframe required a reworking of some processes, particularly commercialisation processes, to be carried out in parallel rather than in sequence. Three milestones punctuated the process: a 'playbook' signoff, when the underlying potential of the new value proposition was ratified by the workgroup; a 'market requirements' signoff, when the existence of a commercially viable target market and a means to sell to it was certified; and a 'product requirements' signoff, when the commitment of the relevant product line manager to provide the resources to execute the value proposition was secure and a green light was therefore provided to produce the requisite collateral to launch the new offering. At the point of the 'playbook' signoff, the workgroup usually designated a 'controlling author' for the proposal: either the person who had originated the proposal and therefore had authored the playbook document, or another manager, typically within the core workgroup itself.

Managers often represented the process as an analytical one. First, expert opinion is sought on the market potential for the new proposition. Then, the 'product line' managers who would be responsible for execution are consulted for their views on the costs and feasibility of the new proposition. In the final

stage, the sales managers are asked to consider their target customers and sign up to a promise of the sales expected in the first six months and first year.

One account of the process was:

"Each proposal goes through four stages. First you have to put together two PowerPoint slides following a template called the Playbook. This gives us an idea of whether it's got any legs at all—does it really solve a customer problem? Then if the group approves it, it goes to the MRD [Market Requirement Development] stage. This means we have identified a proposition with market potential. The MRD is where we establish whether we have a good target market for the first few sales and that we know how to sell it and the sales group is happy to sell it. The PRD stage is next, we see if we can make the project operational before the deadline. And if it passes that, then it's launch planning, doing the contracts, providing the sales group with any training needed and so on."

This representation, of successive rational analyses, evaluating projects against some factual hurdles and letting those that surmount the hurdle through to the next stage, is somewhat illusory. The facts of any given value proposition's potential, particularly in the short term, are highly speculative in all but a few cases: only the most incremental innovations can be explained to their customers in a simple way, fall under existing client budgets, require simple steps for adoption, or can be guaranteed to prove a hit with customers prior to launch. Therefore, the assessment of the new proposition's potential is actually an opinion. The purpose of the MRD stage is to put that opinion to the test of scrutiny by a number of individuals whose frames, functional backgrounds and loyalties, and power differ. Emergence from this stage is intended to certify that the assessment of market potential has been sanctioned by the working group responsible for the Rapidstart initiative as a whole: it therefore should be "good enough" for the product line manager whose agreement is required to mobilise

the resources for putting it into place, and "good enough" for the sales team whose consent to sell it and commitment to a certain sales target is sought.

This opinion may be carefully considered. In most cases, arriving at the opinion is done in part through group discussion with internal stakeholders of diverse functional backgrounds, optimising the chance that dissent and discussion can emerge. A checklist of eight dimensions of potential was applied to most propositions, with a green/amber/red designation to indicate the opinion held by the group and the manager filling in the checklist on that dimension. In many cases, initiators or controlling authors held a series of interviews with sales staff to gather views on the market potential; in a few, they visited prospective clients whom sales staff had arranged for them to meet. (For some, more novel, propositions, the case for market potential rested not on an assessment of trends in demand and strength of competing offers, but on an assessment of the direct benefits clients could realise by using the proposition: making it possible, for example, for a client's employee to complete administrative duties on a mobile device rather than having to do so by returning to base, would create value for the customer through eliminating a certain number of hours per employee per annum.)

CONTESTING OPINIONS

The contestation of the opinion sometimes proceeded as the process was designed for it to proceed: the emergence from each stage providing an assurance to those participating in the next stage that scrutiny had been applied. When the opinion was accepted by those participating in the next stage, the next

question would be how precisely to sell the proposition, or how precisely to execute it, or how precisely to fit it into the grid of commercial, legal and accounting support and monitoring systems in which it would reside. But at other times, the contestation of market potential would continue into subsequent phases, after it was intended to be a settled question. If the product line executive whose agreement was sought to bring together the resources needed to launch the proposition declined to prioritise the proposition, his counter-argument was typically based upon the need to actuate the market potential inherent in the proposition. If this argument failed, the next step could be, as happened fifteen times within this study, for the notional champion/team leader of the innovation project to seek a person with the authority or other power to persuade the recalcitrant product line executive to co-operate.

These milestones therefore corresponded with two phases of activity:

Phase One: establishing, among the workgroup, a socially constructed "accepted opinion" as to whether a proposal has market potential (including whether this potential can be realised in the short term).

Phase Two: "forcing" resources and support for the new proposition from the product line and commercial functions based on the imprimatur of the central Rapidstart working group, while gaining the attention of the relevant individuals in the salesforce and focusing it on the potential of the new offering. (This was required because of a complex and diverse legacy of existing offerings, meaning

that any launch of a new offering was dependent on 'punching through' inertia to capture the attention of the salesforce.)

For the most part these phases were purely sequential: new proposals could fail because they did not achieve consensus around market potential in general, or in terms of the feasibility and likelihood of immediate market acceptance; they could fail because time constraints would not allow the launch of the proposal in the specified time scale. However, in several significant cases (both in RapidStart 1 and the later RapidStart 2), the process was iterative—a product line or commercialisation manager, indicating that he or she did not consider the projections of market potential to carry sufficient weight to justify the mobilisation or commitment of the requisite resources, could send the process back to Phase One. Sometimes this blocking action resulted in the failure of the proposition; in others, the workgroup devised ways to circumvent the blockage, either by securing the support of a manager whose seniority or other power was sufficient to override the block, or by re-channelling the proposed offering to a different product line manager with access to a different set of resources.

During RapidStart 1, the value proposition proposals originated in two distinct sources: with sales and business development employees, or with product line managers. In the former case, the rationale supporting the proposal typically revolved around the ready market perceived by the salesforce member among his or her existing account relationships for the proposed proposition; in the latter, rationales offered were similar to this manager's:

> *This is something we've intended to do for ages. This was a good way to get it off the ground, as the sales teams are all being geared up to launch these ideas.*

Across the six weeks of RS1, 40 propositions were considered and rejected, but five new propositions were launched in June 2008. Total sales for these propositions in their first six months were c £85m. A further three, which had taken longer to develop, were launched that September.

This was perceived to be a success, as the target originally set for "in year margin" going to the bottom line in FY 2008-09 had been hit. The manager who had initiated the programme was promoted to a new role, and Rapidstart 2 (RS2) was initiated in November 2008.

A number of changes were made to the programme. The target launch date for RS2 was April 2009, meaning the process would run over six months instead of six weeks. Eight of the original 25 workgroup members who had collaborated on RS1 would continue to focus on RS2—these were the eight members whose 'day jobs' before they were involved with the RS1 initiative were evaluating and shepherding new value propositions through the process. The success of RS1 gave birth to a bold new 'strategic objective' for the value proposition innovation process: to lift new, replicable value propositions to 50% of gross revenue in the business-to-business services division.

This new objective, combined with the longer timeframe of RS2, led the remaining group to consider that it should shift somewhat away from purely recombinative projects and welcome (and indeed search for, unearth and stimulate) proposals that were less "obvious" than those which had been evaluated and developed during RS1.

Post-mortem evaluation of RS1 indicated that a major reason for the perceived success of the innovation launches had been successful engagement of the sales force. Based on this finding, the RS2 approach was to "strengthen" this aspect of the process, by engaging the sales managers responsible for the various market sectors at an earlier stage in the process, and to do so in more formal discussions, with the intention that the dialogue would culminate in each industry vertical sales manager "taking a target", or stating in writing an agreement to what had been, in RS1, simply an opinion, arrived at by the core workgroup, about short term market potential.

The RS2 process evaluated 58 propositions and selected eight for launch; five of these were ready in time to be launched in April 2009. Industry vertical sales managers signed up to targets to sell £133m of these value propositions during the 2009/10 financial year.

The April 2009 launch was unsuccessful. Less than a week after the first of several planned launch events was held, Philoctetes announced a significant reduction in the size of its workforce, and accompanying restructuring of management responsibilities, in response to the economic changes of 2008-2009. The attention of the sales force was not on embedding new propositions into their client relationships, but on the restructuring, and managers in several parts of the organisation indicated that, effectively, "all bets were off" in terms of commitments and plans that had been made in the period immediately prior to the restructuring announcement: the impending changes of management roles

were believed by many of the study's informants to mean that the newly launched propositions were, to all intents and purposes, "dead". The RS2 leader (who had also been a leading member of the RS1 management workgroup) was moved to a key account management role, the value proposition innovation workgroup was reduced to three members, and its role reviewed.

ANALYSIS

The innovation proposals arising during RS1 were grouped, under analysis, into two families: innovations proposed by members of the sales teams and innovations proposed by members of the product line management teams, with the backing of those teams. During RS2, some innovation proposals fell into a third family: innovations proposed by intrapreneurs. These latter proposals were initiated by individuals in the product line management teams, but without the support of those teams. Intrapreneur-originated proposals sought financial resources from the RS2 workgroup to complete or move forward some aspect of development of the value proposition, whereas product line-originated proposals, as has been mentioned, were characterised by their proposers as "ideas we've been meaning to do anyway" and arrived at their earliest stage with an explicit or implicit promise of access to the product line-controlled resources needed for their operationalisation, once the market opportunity was validated by the RS workgroup.

The "family of origin" of the proposal had a fundamental effect on the boundary-spanning activities undertaken by the RS workgroups in identifying, evaluating and developing that proposal. These boundary spanning activities are described

below. First I examine how boundary-spanning activities differed, and contributed to or constrained success at each stage of the innovation process; secondly, I consider how the boundary-spanning activity varied between RS1 and RS2 and what impact this had on the success of the innovations in each stage.

The search for proposals

Many informants spontaneously mentioned that being associated by colleagues and senior managers with a successful new offering was an important source of informal power and springboard for promotion opportunities within Philoctetes, and this was offered as a rationale and motivation by many originators—including all of the intrapreneurial originators—for putting forward proposals to the RS workgroup. The family of proposals originating with the sales teams were also stimulated by a more direct incentive: sales team originators emphasised that if their proposals were accepted and developed, they believed they had ready customers for the new propositions. This would at least generate sales commission and help towards meeting personal and group targets; some originators further suggested that their proposals were important in responding to competitive threats to their strategic client relationships, or simply to cultivating those relationships through the value the propositions might deliver to their clients.

The RS process did not start by scanning the network of core workgroup members for potential opportunities. The mechanism for eliciting opportunities was a "pull" process, depending on informing, through email, informal

communication and announcements at meetings, a wide range of individuals within the division about the RS initiative and then relying on self-interest to drive the production of initial "playbook" proposals. Unidirectional communications emanated from the core workgroup through the thin conduits of the division's network, supported by the perceived seniority and position of the individuals in the strategy directorate sending the communications, and innovation proposals were the response: there was no aspect of persuasive one-to-one dialogue involved.

Validating market opportunity

During RS1, the process of establishing that an innovation proposal related to a realisable market opportunity was based on very rapidly conducted dialogues between key decision makers. Here, the network connections and boundary-spanning functions of the core workgroup were significant in determining the outcome of these dialogues and whether or not they provided support for the innovation.

Where proposals arose from the *sales teams*, they came with data about prospective clients attached. In some cases, the RS workgroup considered that these clients, and the supporting information in the proposal about their readiness to buy, validated the opportunity and supported the market requirements sign-off; in others, they required more information from the sales managers of industry verticals different to that of the originating sales team member, to estimate and consider the adequacy of the market potential across a broader cross-section of the market.

Where proposals arose from *product line managers*, the nature of the market opportunity was less concrete. In several cases, RS workgroup members arranged and accompanied product line managers on visits to clients with whom Philoctetes had a strategic relationship, to sound out the client's reception of the innovation proposal and thereby to develop support for the market requirements element of the evaluation process.

In RS1, with its rapid time pacing, the boundary-spanning RS workgroup played a significant role in opening up channels of communication, seeking feedback and gathering information to support the development of the innovations. 34 proposals were rejected in RS1, but then reviewed again in RS2; of these, over half were eventually to achieve the market requirements sign-off (and two were to be launched, in April 2009.) In some cases, this simply reflects the underlying 'true' market potential of the proposal; however, one difference between those proposals which were able to achieve market requirements sign-off within the compressed timescale of the RS1 initiative and those that had to wait for the second stage to achieve this status was whether the RS workgroup member principally responsible for assessing the particular proposal was able to access, through pre-existing ties, a person able to provide the additional information needed to validate and support (or invalidate and reject) the scale of the market potential. The presence of such pre-existing ties to confirming sources of knowledge predicted the boundary spanning workgroup member's ability to *rapidly* validate the projections made by the proposal originator as to market potential, but such ties were not necessary for the boundary-spanning member

to do it *at all*—creating new ties to the needed knowledge required time and, in several cases, introductions through other members of the RS workgroup.

Assembling resources and commitments

Phase Two of the RS process took place when the market requirements sign-off stage was complete. As with the market scoping process, the originating source of the innovation proposal played a significant role in determining the task structure in this phase. Where sales teams had originated the proposal, the RS workgroup had now to persuade product line and commercial managers to accept that the market projections ratified by the workgroup credibly supported the request for resources and commitments necessary to operationalise the innovation. Where the product team had originated the proposal, the road was considerably smoother: such proposals arose from managers who already believed the innovation was necessary and credible.

Thus, proposals originating in the sales teams were more likely to pass through the market requirements signoff and fall at the operationalisation hurdle; those originating from the product lines were more likely to struggle with establishing market viability while passing more easily through the process of assembling resources and commitments to launch. However, the difficulties, in both cases, were mitigated when the RS workgroup assigned a controlling author to manage a particular proposal whose personal background prior to working in the strategy directorate was the *opposite* of the origins of the proposal. Having such a controlling author appears to support the ability of the proposal to pass through the successive hurdles in the process.

Figure 2—RS1 “Launched” initiatives

Case	Domain of Origin	Team Leader	Passed Market Requirements?	Passed Operations Requirements?	Rerouted around block?	Judged a success?
A	Marketing	Marketing	Y	Y	-	Y
B	Marketing	Product Line	Y	N	Y—used existing ties	Y
C	Product Line	Product Line	N	Y	Y—used existing ties	Y
D	Product Line	Marketing	Y	Y	-	Y
E	Marketing	Marketing	Y	Y	-	N
F	Marketing	Product Line	Y	Y	-	N
G	Product Line	Product Line	N	Y	Y—used existing ties	N
H	Product Line	Marketing	N	Y	Y—used existing ties	N

Cases B and D, where a mismatch, or complementarity, occurred were by some distance the most successful innovations, in terms of sales and the eventual assessment by managers of the lasting impact the new value proposition has had and would continue to have on the firm’s success. In these cases, and in others in RS2, the mismatch was not in any way an accident: the RS workgroup identified these as high potential opportunities early on, knew they would sail through the process related to their originating context, and assigned a controller who would be able to steer the proposal through the stage in which it

would be more contested. This type of complementarity was not always the result of a planned approach, however. In some cases the decision to assign a controlling author different to the actual originator of the proposal was based on the workload of the originator; in at least four other cases in RS2, the decision was based at least in part on replacing an originator seen as too junior or lacking interpersonal expertise with a more seasoned operator. (The importance of interpersonal skill in boundary spanning is emphasised by Burt (2004), who suggests that experience of structural hole spanning builds up the skills of comprehending and translating communications between the two contexts.)

Figure 3—RS1 'unlaunched' initiatives, all proposed/reviewed again in RS2

Number of Cases	Domain of Origin	Team Leader	Passed Market Requirements?	Passed Operations Requirements?
13	Marketing	Marketing	Y	N
4	Marketing	Product Line	Y	N
7	Product Line	Product Line	N	Y
7	Product Line	Product Line	N	N
3	Product Line	Marketing	N	N

Overcoming blockages

During RS1, there were many reasons why 17 of the 24 proposals which surmounted the market requirements sign-off hurdle were unable to achieve the product requirements sign-off needed to progress to launch. Often these reasons related to the tight timescales and the necessity of agreeing some aspect

of executing the proposition with a third party such as a supplier or an alliance partner which could not be done without negotiation. However, in four cases, proposals which had notionally passed the market requirements sign-off milestone encountered resistance from product line managers, explicitly stated to be based on "disbelief" of the ratified market projections and their credibility as a basis for allocating product line resources. (Some, or many, of the other cases of failure by proposals to surmount this hurdle may, of course, have been related to such disbelief, merely not openly expressed by the product line managers.)

In these cases, the RS workgroup did not accept this rejection by the product line manager, but sought to find a more senior product line manager, or a product line manager who controlled a parallel set of resources, to override the rejection or to provide an alternative path to the launch process. In observing this critical moment for the workgroup, a recurring pattern emerged which shows the interplay of ambassadorial boundary spanning activity with network structure.

In two of the four cases, when the RS workgroup discussed the quest for "someone senior" or "someone different" to override the veto from the product line, the workgroup was only able to identify one member who had pre-existing ties to a 'likely prospect' to target. In the other two cases, there were two workgroup members who identified "someone we can work on" among their contacts. In the former cases, the member with the tie to the necessary political support is a gatekeeper and a broker. In the latter, there is no gatekeeper, broker, or structural hole (one could say 'there are two gatekeepers', but by definition if there are two bridges then there is no structural hole and therefore

no broker). In the latter cases, both efforts succeeded in finding an alternative sponsor and in rising above the original veto. And in these two cases, the workgroup members providing the bridges to the new sponsors described their efforts in locating someone with a diligence and enthusiasm which appeared to contrast with more diffident, tentative efforts made by the lone workgroup members in the cases where they were the sole bridge to a potential sponsor.

How does a gatekeeper profit from her structural hole-spanning? In some cases she may block a particular route for information or resources, in order to preserve an overall state of affairs she finds desirable or profitable. In others, in which she co-operates with his alters within the various workgroups of which she is a member, she routes a desirable piece of access to knowledge or resources (tangible, such as a budget allocation, or intangible, such as an endorsement leading to legitimacy) to the contact from whom she perceives she will receive the highest value return in immediate or future recognition. This recognition may come purely in the form of exchange, but unless the particular tie between the gatekeeper and the alter is perceived by the gatekeeper to be a transient one, the recognition will also come in the form of a "relationship"—one in which the alter may return, for reasons of efficiency or habit, to the gatekeeper again and again for further access to the bridge she holds. In a workgroup context this means being established as the "go to" person for particular sorts of knowledge or resources.

Where the workgroup or alter has a choice of two or more people who can provide bridges, and all parties know it, the (former) gatekeeper's position

changes markedly. The blocking option vanishes, or requires the "bridges" to collude in such blocking. Also, the existence of the second bridge hugely diminishes the value that the quondam structural-hole spanner can extract for a particular piece of information or resource, as shown by Burt (2000). But the behaviour of both bridges will be influenced by the utility they ascribe to their ongoing relationship with the workgroup or alter. If the alter or workgroup perceives one or the other bridge as being more successful than the other at accessing knowledge or activating support in the target domain, he or it may be more likely to continue to "use" that bridge as the preferred 'supplier' of the knowledge or support-activation, giving that bridge more opportunities to gain from such interactions.

In other words, the presence, within a workgroup, of a second bridge to a desired target domain may do much more than simply double the chances for that workgroup to activate support or access knowledge from that domain. All the usual benefits of competition may come into play as well, as the "bridges" work to be seen as the more successful and useful of the two alternative routes.

RS1 vs RS2

The organisation of the original RS workgroup, which brought together 25 fairly senior managers, most with cross-functional experience (and therefore clique-crossing ties), created a new dense cluster with collectively new bridging ties. It also changed the nature of the ties—the relatively open-ended nature of the innovation scanning, evaluation and development task, compared to the "day

job" where obligations were based primarily on functional roles; the new responsibilities within the 11 subgroups of the workgroup; the tight deadlines associated with the task, requiring extraordinary efforts—all of these factors contributed to ties which may previously have had thin bandwidth becoming thick, to ties previously based on minimal interdependence becoming, at least for the duration of the RS initiative, more interdependent. These factors stimulated many workgroup members to share their boundary-spanning ties with each other when task co-ordination and ambassadorial boundary spanning activities were required (not least when the leaders of the workgroup prompted them to do so.) In a few cases, informants described how, in the context of their "day jobs", certain other members of the workgroup had tasks which meant that they were normally working at cross purposes or in conflict with the informants, but that such tensions and conflicts were muted under the pressures of the innovation project.

During RS1, a dense network cluster was formed, with a relatively large number of member components (compared for example to the classical "eight member team") meaning a greater degree of redundant ties and fewer gatekeepers, brokers and structural holes—particularly structural holes separating departments. When the RS workgroup took over responsibility for a pre-existing idea or project, the RS workgroup as a whole almost certainly enjoyed greater centrality in the firm network—through the creation of this cross-functional 'super-cluster'—than had the team previously working to develop the project.

Many of these characteristics of the RS workgroup, which through greater connectivity in boundary-spanning activities, supported its success, were not present when the core team working on the project was reduced to eight people in the RS2 phase of the project. At this point, a task was added to the process, parallel to the product requirements assessment and following the market requirements sign-off: an extended period of discussion with the sales teams, negotiating with each market vertical sales team the sales volume target that it would sign up to as and when the new value proposition was launched. The intention of this change in the process was to build on the success the RS1 process had enjoyed in building the commitment of the sales teams. This change had a second effect, which was that during the RS2 process, there were no "push backs" from the product line managers to accepting the validity of the market requirements sign-off. This did not appear to have been an intended, designed-in by-product of the process change, but it is at least suggestive to note that in my interviews with product line managers, the point was raised several times that if the sales team was willing to sign up to a target, that it was much more contentious for a product line manager to suggest that the value proposition would not find an audience. As it seems clear that there were at least partially common exogenous reasons for the failure of the innovations launched in RS2, it is speculative to consider the effect this may have had on the success of the RapidStart process as a whole. Nonetheless, the question is intriguing: was it helpful to the innovation process to use the apparent endorsement of sales teams to 'push through' more innovations? Or did this represent the removal of an important quality filter in the process?

It was observable that the smaller workgroup controlling RS2 carried with it some negative implications. As well as the point which has already been noted, that the overall diversity of ties, and therefore the opportunity for boundary-spanning using pre-existing ties, was lower with a central group of eight than with a group of 25, the number of individuals designated controlling authors was also much smaller, with many controlling authors taking forward half a dozen proposals through the process rather than one or two. This led to prioritisation behaviours by the work group members (cf Hansen and Haas 2001), who had to make choices about to which project to devote their time and pin their social capital-building efforts.

Figure 4—RS2 Projects

From RS1?	Number of Cases	Domain of Origin	Original Team Leader	Team Leader Replaced?	Passed Market Requirements?	Passed Operations Requirements?	Launched?
Y	11	Marketing	Marketing	N	Y	N	N
Y	2	Marketing	Marketing	Y	Y	Y	Y
Y	4	Marketing	Product Line	N	Y	N	N
Y	7	Product Line	Product Line	N	N	Y	N
Y	2	Product Line	Product Line	Y	Y	N	N
Y	5	Product Line	Product Line	N	N	N	N
Y	3	Product Line	Marketing	N	N	N	N
N	10	Marketing	Marketing	-	Y	N	N
N	2	Marketing	Product Line	-	Y	Y	Y
N	5	Marketing	Product Line	-	Y	N	N
N	3	Product Line	Marketing	-	Y	N	N
N	1	Product Line	Marketing	-	Y	Y	Y

Propositions

Some findings and resulting new theoretical propositions, to be tested through other studies and research methods, demonstrate the significance of examining micropractices and the innovation process over a period of time.

Proposition 1a. Innovation teams whose leader is identified with a different organisational domain than the domain of origin of the team's idea, are more likely to gain political support than those whose leader is the originator of the idea, or those whose leader is identified with the same organisational domain as is the team's idea, leading to greater success for the innovation.

Proposition 1b. Innovation teams whose leader is identified with a different organisational domain than the domain of origin of the team's idea are more able to successfully translate the knowledge from their own domain needed for the innovation to succeed, leading to greater success for the innovation.

Proposition 2. When multiple bridges from the innovation team to a particular organisational domain exist, it stimulates competitive behaviour between the individuals in the team to provide useful access to information and resources, leading to greater success for the innovation.

Proposition 3a. Longer time for an innovation process allows more effective and greater likelihood of an innovation team identifying and building wholly new connections to needed resources and knowledge, leading to greater success for the innovation.

Proposition 3b. Longer time for an innovation process reduces urgency, which reduces the effectiveness and likelihood of an innovation team identifying and building wholly new connections to needed resources and knowledge, leading to less success for the innovation.

Proposition 3c. Shorter time for an innovation process increases urgency, which increases the effectiveness and likelihood of an innovation team using existing connections to needed resources and knowledge, leading to greater success for the innovation.

Taken together, propositions 2 and 3a-3c support the "network component diversity theory" advanced by Fleming King and Juda as to why small world networks work, as opposed to the path length theory. Proposition 2 accords with what is known about the power of brokers and gatekeepers, but suggests that the countervailing effect of building multiple bridges to a domain does more than simply defuse the blocking power of a structural hole-guarding gatekeeper, it actually promotes fruitful exchange with the domain.

Proposition 4a. Where innovation team members are working only part-time on an innovation and have other job roles to perform, they will have more active network connections in other domains and will be able to call on these for needed information and resources more effectively, leading to greater success for the innovation.

Proposition 4b. Where innovation team members are working only part-time on the innovation and have other job roles to perform, they will be less willing and able to perform needed boundary spanning actions on behalf of the team, leading to less success for the innovation.

The effects described by Proposition 4b are attributable both to the reduced time available (Hansen & Haas, 2001) and to reduced willingness to "expend" social capital on the project (e.g., by calling in past reciprocal obligations) when it is a part-time, and likely a transient one.

However, considering only the question of time and prioritisation, it should be noted that of the four types of boundary-spanning behaviour for innovation teams identified by Ancona and Caldwell, scouting and ambassador behaviours require less time than co-ordinator and guard activities. In the observations made in the present study, the former two require single or occasional conversations, while the latter are ongoing tasks of negotiation and persistent discussions with alters. Therefore:

Proposition 5. Where innovation team members carry out ambassador and guard types of boundary-spanning activities, it increases the likelihood of the success of their efforts if the contacts with whom they perform the activities are informal, relationally embedded contacts, leading to greater success for the innovation.

These two types of innovation team boundary spanning activities often require requests for exceptions from rules or normal procedures, and are therefore more effectively carried out with contacts where there is more than a formal, hierarchical or lateral relationship.

DISCUSSION AND CONCLUSIONS

The study of networks is flourishing. The study of behaviour in networks is much less developed. By considering the innovation team, its behaviour and the behaviour's apparent consequences for success, this paper makes its most significant contribution through its effort to unveil relationships and mechanisms at work in organisations conditioned by networks and their constituent agents. The individual propositions advanced are of interest and make their own contributions—but, in part due to methodological difficulty, exploring the connections over time between individuals, teams, their (individual and team) networks and the success of their efforts is rarely tried. This is going to have to change if we are to develop theory to help practitioners take advantage of their network context.

CHAPTER 3: **A brief reflection on Chapter 2: Not an Apologia**

As briefly mentioned in the introduction, the (extensive) fieldwork for Chapter 2 was carried out six years ago, at the very outset of my PhD studies. While I believe the propositions advanced above are well-grounded in the data I was able to gather, the study as a whole was limited by three factors:

--the sudden and unanticipated end of the RS2 process, shortly followed by my principal sponsor being reassigned, and then made redundant, limited my ability to follow up with team members to fill in "holes" in the data and reach a higher level of precision in my ability to compare and contrast the case data. Colleagues in the firm were warm and even kind in response to my requests for more data and additional interview time, but unconvinced of the value of providing retrospective data about a dead and "failed" project—many were keen to distance themselves from their involvement.

--I had not yet reviewed the innovation management literature or the networks literature in depth. Some review went on in parallel with the fieldwork.

--I was inadequately systematic about considering my level and unit of analysis before the study, and believed for a time that my primary focus should be on the innovations and their success or failure, rather than the people/teams and their behaviour. Early drafts of this study attempted a detailed matching of the nature of the technologies involved in the value proposition innovation with the background of the team members, for example, and I placed a deal of

significance on the data I had about sales figures, but in the end these data did not appear to be generative.

Based on this experience, I came to a view during 2010-11 that the attempt to do grounded theory had served me badly and that the study, despite the extensive and interesting data collected, had "failed". I did not, at that time, advance to the stage of forming the propositions that close the study.

However, over time I came to see that perhaps the study had been significantly generative, in three ways.

Firstly, the basis of my contribution to the conceptual study (in Chapter 4 of this thesis) was grounded in the exposure to a live innovation setting, and a continued circle of reflection on the data as I became fully immersed in the networks literature.

Secondly, when I entered the field again (for the study which is presented in Chapter 5 of this thesis) I had a much clearer view of how to iterate between theory and data than I would have had if I had never 'failed' with this study, and I believe the resulting study and its propositions are much stronger as a result.

Finally, when I returned to the data for Chapter 2 at the end of 2013, listening to interview recordings again, revisiting the coding I had done in 2009, and trying to understand where the data might still be generative for theory, I saw that in some significant ways, the data, however imperfect I had thought it in 2010, was

rich in context and would underpin some theoretically significant propositions that address a gap which still remains in the literature about the processes and mechanisms by which action by teams intersects with their networks.

Chapter 4: **BUSINESS MODEL INNOVATION: A TEAM-BASED APPROACH**

An earlier draft was co-authored by Barkema, H.G.; Coleridge, C.; Qin, F.; Smit, J; Stam, D. A. This has been updated by the present author for the purpose of integration into this thesis.

Abstract

This paper offers new theory on the rapidly emerging field of Business Model Innovation (BMI), at the micro-level of the responsible team. Specifically, we develop propositions on how and why leadership styles, in themselves and combined with the social networks of the team, influence performance, and how these mechanisms differ across the concept and development stages of BMI. Through our TIMOTI model, we go on to make our theory fully dynamic, conceptualizing how and why BMI team characteristics and performance at the concept stage influence similar variables at the development stage, implying a path-dependent trajectory. As most current papers on business models examine *what* influences performance and *how*, but not *why* (cf. Whetten, 1989), we believe that the proposed new theoretical logic for studying BMI is both timely and adds to broader innovation management theory.

Business model innovation is of rising importance in practice. For companies in the West, and those serving upper and middle classes in emerging economies, this is driven by more dynamic global competitive conditions, rapidly advancing technology, and increasingly knowledgeable customers. Senior executives of these companies increasingly appear to see business model innovation as an important source of competitive advantage, more so than product or process innovation (IBM, 2008). Meanwhile, at the "economic base of the pyramid," (Prahalad, 2010), new business models are beginning to enable companies, social enterprises and NGOs to succeed economically while creating social value for new clients in sectors such as mobile banking, health care, and solar energy (George et al., 2012).

The rise of a new management practice, such as earlier Total Quality Management, Business Process Outsourcing, or Six Sigma, is often marked by enthusiastic contributions aimed at practitioners, after which more neutral, research-oriented publications emerge (Abrahamson, 1996; Abrahamson & Fairchild, 1999). Business model innovation (BMI) is no exception. It is in the early stages, where practical benefits are emphasized, with research gradually following. Practical and initial research contributions alike typically focus on the *design* of new business models: on which components or activity systems contribute to success (for instance, a customer value proposition, a revenue model, resources, assets, distribution channels, and partners (Magretta, 2002; Morris et al., 2005; Mitchell & Coles, 2004; Tikkanen et al., 2005; Chesbrough, 2007; Fiet & Patel, 2008; Johnson et al., 2008; Zott et al., 2011; Baden-Fuller &

Morgan, 2010; Casadesus-Masanell & Ricart, 2010; Chesbrough; 2010; Teece, 2010; George & Bock, 2011.))

However, in order to offer a theoretical contribution (Whetten, 1989), management researchers need not only to address the questions of "*what?*" (i.e., which variables) influences BMI performance; and "*how?*" (i.e., direction of the relationship), but also *why?,* i.e., offer a theoretical logic for these relationships. While the above studies discuss what influences success (e.g., a value proposition, a revenue model) and how (e.g., a positive relationship; or, that multiple components are needed in combination for success, Morris et al., 2005; Johnson et al., 2008), they typically do not extensively address the '*why*'. They do not offer a (new) theoretical logic for the relationships, which in Whetten's terms means they do not offer a significant theoretical contribution. Furthermore, the analyses within the above papers are quite static; they tend to focus on what influences the outcomes of BMI, not the *process* of BMI. Our work aims to address these gaps.

We examine the setting of an established organization, such as a multinational corporation, or an established social enterprise or NGO, developing a new business model. We adopt a micro-approach to study the process of BMI, focusing on the *team* responsible for the BMI. Teams are increasingly seen as the building blocks of modern organizations (Kozlowski & Bell, 2003). Our approach is anchored in – and combines insights of – innovation management (Ancona & Caldwell, 1992), social psychology of teams and leadership (Ilgen et al., 2005; Lord & Brown, 2004; Shamir et al., 1993) and social network theory (Oh et al.,

2004; Kilduff & Brass, 2010). We develop new theory and propositions on which types of social networks and leadership styles contribute to BMI performance, and how this differs across stages (i.e., concept and development stage) for successful BMI. We also make our theory dynamic, implying a path-dependent trajectory where team characteristics (e.g., leadership, social networks) in the concept stage influence those same variables – and ultimately BMI performance – in the development stage in predictable ways.

We believe we offer several theoretical contributions. First, we offer a novel theoretical approach for the emerging field of BMI by conceptualizing BMI as a team-based, path-dependent process. Given that the field is currently taking off, we believe offering such novel theory is quite timely (cf. Abrahamson, 1996; Abrahamson & Fairchild, 1999).

We believe our theory adds to the broader innovation literature as well. Previously, researchers in corporate venturing (Galbraith, 1982; Burgelman, 1983a, b; Cornelissen & Clarke, 2010) and the ambidexterity literature (O'Reilly et al., 2009) have also studied how new ventures emerge in established organizations, sometimes studying process and using rich case study analysis (Burgelman, 1983a, b; Garud & Van de Ven, 1992). The idea of process is at the heart of the ambidexterity literature (Gibson & Birkinshaw, 2004; Raisch & Birkinshaw, 2008; O'Reilly & Tushman, 2008). None of these literatures however examined the micro-processes, at the level of the BMI team, of how and why internal team factors (e.g., types of leadership) interact with external team factors (types of social networks, with whom, and for what) to influence

performance, and how this varies across stages of BMI. Hence, our new theory complements these existing research streams.

Our theory also builds new links between social network theory and social psychology. For instance, social network theorists earlier examined which types of networks facilitate innovation (Uzzi & Spiro, 2005; Reagans & McEvily 2003; Reagans et al., 2004). However, as Kilduff and Brass (2010) recently emphasized, social network theory tends to ignore "human agency." Perhaps our new theory on how and why specific leadership styles motivate team members to better use their social networks, is one promising avenue to fill this gap.

Our paper is structured as follows. We first discuss why leadership and social networks are important for BMI. Then we develop new theory and propositions on how and why different types of social networks and leadership influence BMI performance, and how this changes when moving from the concept stage to the development stage. Next we make the theory dynamic, on how and why team variables in the concept stage (leadership, social networks, identity, etc.) influence those same variables in the development stage, conceptualizing BMI as a team-based, path-dependent process. We end with conclusions and suggestions for further research.

SETTING THE STAGE

BMI Uncertainty and Complexity

From a behavioural perspective, BMI means the act of designing and implementing a new business model. The business model literature focuses on a great variety of components which are argued to be important for success; however, recent convergence points to a business model requiring a value proposition, a revenue or profit model, key processes and resources, a distribution channel, and partners, where each component needs to be put in place with their combined functioning in mind (Magretta, 2002; Morris et al., 2005; Mitchell & Coles, 2004; Tikkanen et al., 2005; Chesbrough, 2007; Fiet & Patel, 2008; Johnson et al., 2008; Zott et al., 2011; Baden-Fuller & Morgan, 2010; Casadesus-Masanell & Ricart, 2010; Chesbrough; 2010; Teece, 2010; George & Bock, 2011). Business model *innovation* occurs when a firm changes multiple components of its business model (often in combination), for instance, as compared to how business models have previously been used in the industry.

Going beyond a company's current activities implies substantial *uncertainty* (Daft & Lengel, 1986; Garud & Van de Ven, 1992; Stone & Brush, 1996; Forbes, 1999). Team members do not know whether the process will lead to success (March & Olsen, 1976; Mintzberg et al., 1976; Weick, 1979; Ghemawat, 1991). They may be uncertain about what the value proposition will be, which technology should be used, whether there will be demand for the new product or service, and with whom to partner. There may also be uncertainty about what the tasks and roles of individual team members will be, and whether they will be willing to work for each other, or whether conflict or, more subtly, giving

priority to other, day-to-day activities is more likely. They may also be uncertain about whether the team will be get the necessary resources (information, money, people, technology) from the organization to develop the new business model and, at the earliest stages, whether there will be a capable team and leader in the first place. All of this is important for team members, as the eventual fate of the BMI may boost or blot individual careers.

BMI is *complex* (Levinthal, 2002) in the sense that the effect of one component (e.g., a value proposition, or revenue model, or alliance with partners, or distribution channels) on the performance of the new venture, depends on other components. This interdependence sets BMI apart from other types of innovation, such as process or product innovations, which are typically more bounded within existing firm capacities. The contribution of one team member to BMI success depends on those of others, and the contribution of internal team members depends on external team members. This adds further uncertainty to the BMI process as well, as a non-aligned team members may disproportionally hamper BMI performance.

Below we will argue that social networks and leadership are key under these conditions of uncertainty and complexity.

Social Networks

BMI often includes financial, operational, technological, and marketing and sales aspects, which requires a multifunctional team. Team members are required to source, share and combine information and other resources from outside the

team, in interaction with others inside and outside the organization (e.g., partners, suppliers, distributors). Typically, a variety of intangible (e.g., information) and tangible resources are needed, for which political or "ambassadorial" support from within the organization is important (Ancona & Caldwell, 1992). For all of this, a team's social networks are vital (Ancona & Caldwell, 1992; Oh et al., 2004, 2006).

Important *intangible* resources for innovators include information about new customers and markets (Slater & Narver, 1995; Von Hippel, 1986; Prahalad & Ramaswamy, 2004); organisational and partner capabilities, technology and resource availability (Leonard-Barton, 1995; Prahalad & Krishnan, 2008); 'know how' or process information (Nonaka & Takeuchi, 1995; Van de Ven et al., 1999); 'know who' or contact knowledge for experts, influencers, brokers and decision-makers inside and outside the organisation (Nadler & Tushman, 1997), as well as information about their priorities, allegiances and preferences (Tsai & Ghoshal, 1998). Especially at the implementation stage, the group typically needs substantial *tangible* resources as well: money, staff and access to technology. These intangible and tangible resources may be obtained from a broad variety of parties within the organization (from R&D, the marketing department, other businesses), and from outside (e.g., partners or lead clients).

The central role played by intangible resources in product and process innovation has meant that comparatively little attention has been paid in the innovation management literature to the flows of tangible resources to innovation projects (Bueno et al., 2010) and an assumption of some of the few

investigations that have been done (e.g., Parthasarthy & Hammond, 2002) is that resource investment, in R&D-intensive innovation, is frontloaded. However, this may not be true for BMI, which does not necessarily rely on basic R&D advances, while typically substantial tangible resources are needed for the development (e.g., prototypes, pilots) of the new product or service, logistics, distribution channels, relationships with partners, and so on.

These resources are easier to secure if these parties are aware of – or influenced by – *political support* enjoyed by the BMI team (March, 1962; Ancona & Caldwell, 1992; Van de Ven et al., 1999; Kanter, 2000). Political support is necessary to anchor the innovation in the organization: to open doors to its capabilities and tangible resources, to develop a legitimate place within the firm's portfolio of activities (Anand et al., 2007), to withstand pressure from elements within the organization that are disrupted by the change the BMI represents. This is especially important if the BMI goes against the dominant logic of an organization's leading coalition (Prahalad & Bettis, 1986, Covin & Miles, 2007). In fact, all four of Prahalad and Bettis' original dimensions of dominant logic may be challenged by (successful) BMI: the firm's competitive strategy and its measures of performance, and the values/expectations and reinforced behaviour of its managers. Thus, compared to 'normal' product or service innovations, BMI is even more dependent on the explicit sponsorship of high-ranking managers in order to legitimize its development and its effort to source intangible and tangible resources. The sponsorship of senior managers may be channelled through a champion (Burgelman, 1983a, b; Nadler & Tushman, 1997; Markham, 2000, Howell et al., 2005). The champion may also be the workgroup leader, but

as the name implies, the function of the champion is to canvass support and perform the ambassadorial (Ancona & Caldwell, 1992) boundary spanning tasks required to build support beyond the organisational span of the project's explicit sponsor, and so may include other, for instance, higher level managers in the organization as well.

Leadership

The BMI task implies much uncertainty, especially at early stages. Moreover, multifunctional or diverse teams are needed, which are known to be conflict-prone (Jehn, 1995), yet due to the interdependency of tasks, success depends on team members' individual motivation and cooperation, for sourcing, sharing and combining information and other resources. Leadership is particularly effective if a task is challenging and if conditions or directions are uncertain, if short-term results cannot be measured and monetized through financial rewards, or when faith or moral convictions of team members can be mobilized (Shamir et al., 1993). These are precisely the conditions that are present in the case of BMI.

Leadership is a core function in innovation teams, and also in BMI teams. For instance, Clark and Wheelwright (1992) in their classical taxonomy of innovation team structures argued that in team structures most suitable for radical innovations – heavyweight team structures and autonomous team structures – leaders have a central role. Several scholars have indeed argued that the responsibility for innovation lies squarely on the shoulders of leaders (Jansen et al., 2009; Smith & Tushman, 2005). Considering the complex and uncertain nature of BMI, we believe that leadership is vital to the BMI process.

Leaders may influence followers by what they *say* (e.g., vision or goal communication) and by what they *do* (e.g., role modelling or rewarding; Bass, 1985; Shamir et al., 1993; Howell & Higgins, 1990). Both types of behaviours may reduce uncertainty by giving direction and cues about what is acceptable or desirable behaviour from followers. By clarifying (long-term and short-term) directions, leaders may help participants in the BMI process choose which network ties to use, with whom, for what; and what sort of information and other resources need to be sourced, shared and combined within the team to design and implement the business model. What leaders communicate and what they do may also strengthen the identity of the group (van Knippenberg et al., 2000; van Knippenberg & Hogg, 2003), motivating team members to contribute to the BMI process and its success.

Stages of BMI

Initially, a core innovation group will often not be composed entirely of full-time members (Edmondson & Nembhard, 2009). Even a group with full time staff members will often rely on a fringe of part-time resources for whose attention and priority they must compete. In such cases, group members will prioritise (Hansen & Haas, 2001) the time and effort they are able to devote to the innovation project at the expense of other duties. However, at later stages a full-fledged organization for the new business model may emerge. In fact, in many established organizations, the BMI process is broken down into smaller steps, stages, or milestones, often with deliverables at each stage. However, although the venturing literature suggests that multiple stages exist, there is a clear lack of

consensus regarding the terms or labels for stages, or indeed the number of stages.

Burgelman (1983a,b), for instance, uses four stages of venture development: conceptual, pre-venture, entrepreneurial, and organizational. Garud and van de Ven (1992) describe the agenda setting period, expansion period, and contraction period. Bhave (1994) outlines three stages as well: the opportunity stage, the technology step and the organizational creation phase. Kazanjian and Drazin (1990) viewed the progression of stages as reflections of the problems faced by a venture at a particular point in its development. In fact, stages, depending on the organization can be more discrete (Zaltman et al., 1973) or more fluid. The labels and delineation of stages of BMI differ from one organization to the next (Ruhnka & Young, 1987) and in extreme cases, from project to project.

However, although there is no consensus about the number of stages or how to delineate them, what *is* clear from this literature is that stages *do* exist, each with a different set of tasks, activities and challenges. Hence, below we will assume that at least two stages exist in BMI, which we will label the concept stage and the development stage, and we will show how and why leadership and social networks differently influence performance at these two stages. Identifying stages will also enable us later on to conceptualize BMI as a path-dependent trajectory, where team variables in the concept stage influence those same variables, and ultimately BMI performance, in the development stage, without

making the analysis too complex. Later on we will also show how to extend our conceptual model to more stages.

THEORY AND PROPOSITIONS

The Concept Stage

The concept stage is the earliest stage of the BMI. The initiative is newly formed, the responsible team is small (in extreme cases it could consist of a single individual), status as a formal project may be tentative if at all granted (Kazanjian, 1988), and the key concern is whether the opportunity that has been identified can be realistically and successfully pursued. Team members may be generalists rather than specialists (Galbraith, 1982). The targeted outcome may be something like a business plan or similar deliverable (Galbraith, 1982; Ruhnka & Young, 1987; Kazanjian & Drazin, 1990), i.e. an object of judgment upon which the decision to continue development, kill the initiative, or go back to the drawing board is based. If successful, the project will move forward to the development phase. Below we will first examine social networks: which types of resources team members contribute to performance, and from whom, using which types of social networks, and how social networks may motivate team members to source and combine resources within the team.

Social Networks

Networks and information. Intangible resources play a central role during the concept phase. Team members are typically building in a high-uncertainty environment, together with others inside and outside the team, through a

process characterised by bricolage (Miner et al., 2001) or effectuation (Wiltbank et al., 2006), the BMI concept, which may win the innovating organisation's approval and so be allocated resources for development. This highly uncertain task requires a range of non-redundant sources of information (March, 1991; Taylor & Greve, 2006) and thus a high network range (Granovetter, 1973.)

As BMI is impelled by an organization's need to reshape the basis of competition, it requires a wholly new approach, not simply a 'problemistic search' (Cyert & March, 1963) for a "me-too" response to others' innovations or a simple, incremental change of course. The multi-faceted nature of the desired innovation implies a need for a rich and varied range of information. The BMI group's ability to source such intangible assets from a diverse range of its members' connections and to recombine these in fruitful ways is an important reason for the existence of the group, especially in the first stage, and the success of this search plays an important role in their chances of success (Ancona & Caldwell, 1992; Brown & Eisenhardt, 1995; Rosenkopf & Nerkar, 2001).

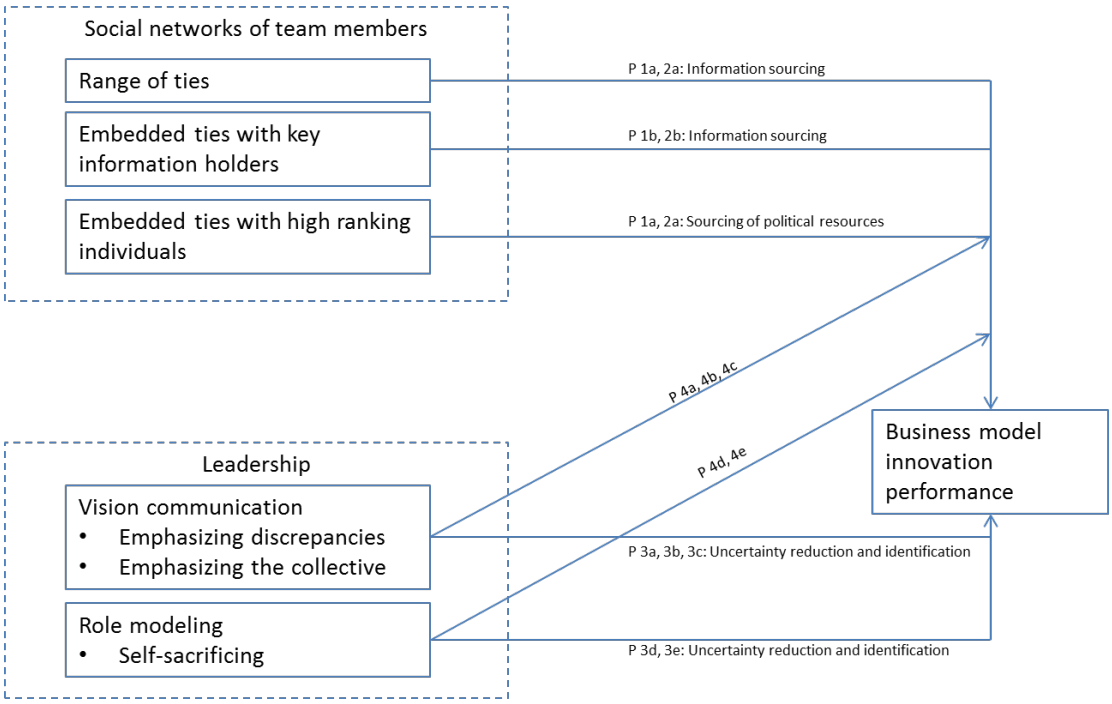
The central activity of the BMI team in the concept stage is to generate innovative ideas and to screen and combine these ideas to design a business model. This requires exposure to new and diverse information, which comes from different functional groups in the organization, such as sales, marketing or R&D, and from outside the organization, such as customers, distributors, suppliers, or other partners. This requires the team to be connected to a wide range of actors inside and outside the organization. This is the group's network "range": the extent to which network connections span institutional,

organizational, or social boundaries (Burt, 1992: 148-149). When team members' ties overlap, the group can access less non-redundant information than if the same number of member ties are mutually exclusive.

In BMI, heterogeneous sources of information are more likely to provide conflicting information (leading to generative examination of the areas in doubt), various information (leading to a greater range of ideas and perspectives), and disparate information (leading to access to the 'long tail' of people with unusual skill sets or backgrounds in an organisation, who know both about the organisation's working and about some domain of knowledge) (Harrison & Klein 2007). While actors with a mutually homogenous network are likely to view issues in a similar way, those with heterogeneous networks are more likely to see things from multiple perspectives and hence are more able to understand and combine diverse information to (radically) new business models. This leads to the following proposition, which, along with others, is depicted in Figure 1.

Proposition 1a: *During the concept stage, teams with members connected with a wider range of actors or groups, both inside and outside the organization, are more effective in sourcing informational resources than teams with a narrower range of network ties, which positively influences performance at this stage.*

FIGURE 1
Overview of propositions in the concept stage



BMI is an adaptation by the organization to new environmental realities (Almeida et al., 2009) and thus requires boundary spanning ties, either directly into the environment to which the organization is adapting (for example, with a member of the client group the new business model intends to serve), or through ties to disparate parts of the organization which in turn have their own external sources of information. Boundary spanning ties may be formally constituted—as in a contractual or hierarchical relationship—or they may be ties embedded in a BMI team member's network of connections. Embedded ties (Granovetter, 1985) are characterised by actors' tendency to rely and call on them in preference to other potential counterparts, and their basis in trust and social obligation (Kilduff & Brass, 2010).

Embedded relationships in a network may originate from the current or former structure of that network: where two people have contacts in common, the consequent mutual monitoring can create trust and co-operation (Coleman, 1988; Tortoriello & Krackhardt, 2010) or norms of cooperative conduct and mindfulness of reputation (Powell, 1990; Moran, 2005; Barden & Mitchell, 2007). Other mechanisms for the development of embeddedness have also been proposed (Tushman & Scanlan, 1981), such as liking (Zajonc, 1968), or trust engendered by a positive history of interactions (Axelrod 2006, Burt & Knez 1995), or the development over time of a mutual understanding (Uzzi & Lancaster 2003), the consequent mutual monitoring can create trust and co-operation (Coleman 1988, Tortoriello & Krackhardt 2010) or norms of

cooperative conduct and mindfulness of reputation (Powell 1990, Moran 2005, Barden and Mitchell 2007).

This trust and social obligation allows (Uzzi, 1996) complex, fine-grained information to be communicated and an increased capacity for problem-solving. Developing a new business model means that an organization requires in-depth knowledge and understanding of the needs, aspirations and dreams, habits and routines, and the economic and social opportunities and constraints of a new client group (London, 2010). This is a creative process, where "new combinations" (Schumpeter, 1912) – new to the organization and perhaps to the world – of value propositions, revenue models, structures, processes and systems, engagement of partners and entire ecosystems, may contribute to success. Sharing of complex information, and joint brainstorming and problem-solving with parties with in-depth knowledge of the client group and the local setting, will contribute to this outcome.

Previous research (Uzzi, 1997; Uzzi & Lancaster, 2003) has suggested that such knowledge transfer and joint innovation do not occur automatically between two connected parties, such as between team members and external parties, especially when the level of complexity is high and the relationship is at arm's length (Centola & Macy, 2007). The barriers come from the difficulty in communicating complex and tacit ideas (Levin & Cross, 2004), some of which may be very different from the company's dominant logic, and the possible reluctance or lack of motivation of one party to pass on the information. As the level of complexity of the information needed rises, the process of information/

knowledge transfer is less random and more effortful, requiring the source to devote time and effort in communicating the information about the new (for the organization) external environment to the team. This transfer is usually beneficial to the recipient but costly for the source, hence the source may not be motivated enough to engage in the transfer

While an organisation may form a contract with a source of information in order to surmount the barrier of a lack of motivation for the information transfer, successful collaborations in uncertain contexts—i.e., exploration and the creation of new solutions—require closer than arm's length relationships. If a team does not have such relationships, it may develop them. Collaborators will need to plan and enact episodes of social interaction, information sharing, and listening, encouraging participation and trust (Raes et al., 2011), creating an environment where it is attractive for parties to propose and "sell" ideas, especially if they perceive themselves to be in a vulnerable position or, at least initially, as outsiders to the process (Lave & Wenger 1991; Dutton et al., 2010). Such behaviour may be encouraged if an external party becomes a team member, as part of day-to-day operations, or is invited to joint workshops with partners and develops a stake in the BMI's eventual success. When the development of embedded relationships is successful, the benefits may not be limited to situations when team members ask for information; counterparts in the target domain may come to spontaneously and actively engage on behalf of core team members in the face of problems and opportunities for them, and persist even when there is no immediate "quid pro quo." Such behaviour may result in social ties persisting even after the particular stage of the BMI process

has ended (Soda et al., 2004), or after the implementation of the specific BM, for future BMI in which the same team members are involved. The trust and co-operation arising from a history of positive interactions to produce liking, trust and/or obligation between two people may survive when the context within which the embeddedness arose shifts—for example when a workgroup breaks up and its members move on to new projects.

Alternatively, the development of embedded relationships with external counterparts may have taken place on past projects and these may already exist at the start of the focal BMI.

In sum, we propose that having at least one embedded relationship with a key external information holder is important to the success of the BMI team in the concept stage. While a broad range of informational sources may be sufficient in more traditional innovation settings for creativity and innovation (Hansen, 1999), we propose that in BMI settings, with the need for access to fine-grained information from new contexts (about value propositions, local suppliers and distributors, other potential partners in the local ecosystem, etc.), an embedded relationship with at least one key information holder external to the organisation, for instance, with a local distributor, or a local NGO in the case of a company starting to operate in an emerging economy, contributes to performance. This also helps the BMI team to counter the firm's dominant logic and the tendency to engage in incremental innovation, making it more likely to develop a compelling, novel business model (London, 2010).

P1b: *During the concept stage, BMI teams with embedded ties with at least one key external information holder are more effective in the sourcing of information than teams who do not have them, increasing performance at this stage.*

Networks and political resources. While the sources of information are scattered in the team's environment, both internal to the organization and external, political supporters are usually from inside the organization (Barden & Mitchell, 2007) and they don't distribute evenly across the hierarchical ladder of the organization (Eisenhardt & Bourgeois, 1988). Whereas having diverse ties to a wide range of people is important for informational resources at the concept stage, possessing ties to precisely those people who have the power to influence and support the focal group is more important for the sourcing of political support (Oh et al., 2006). Therefore we expect connections to powerful actors in the organization's dominant coalition (Thompson, 1967) would enable the team to obtain necessary and timely political support for its initiatives.

For political support, high network range is less relevant at the concept stage. It may even be detrimental. When the idea of a new business model has yet to come into shape, exposure to a wider and more diverse audience may invite challenges, hampering the improvement of the idea at the seed stage and reducing the chance for its further development. More subtly, too broad a range of political ties at this stage may serve as conduits for a firm's "dominant logic" creeping into the design and implementation of the new BMI, resulting in incremental innovation (London, 2010). Ancona and Caldwell (1992) noted that less effective development teams got 'stuck' on the activity of scanning for and

discussing possible variations to its idea, lacking "ambassadorial" support from politically higher-ups—similarly, successful teams need to change their focus from being influenced by their environment to influencing it. Critical to this effort is the strong support of one or a limited number of advocates (Markham, 2000), who are in a position to promote the BMI, are willing to put their reputation on the line to endorse the initiative and to give the BMI team the space to further develop the initial idea.

BMI by its very nature may produce new business models that are quite or very different from the organization's existing business models and dominant logic in terms of value propositions, revenue models, partners, structures, processes and (IT) systems. In fact, as we will argue later (in our theory on leadership), a team leader may *want* to position the new business model as quite different from the firm's existing business. An embedded tie with a senior manager may provide important support. Such an embedded tie may have originated in, for instance, an otherwise hierarchical relationship with the team leader's boss. Or, it may result from a previous embedded relationship, from former projects or experiences (Parise & Rollag, 2010). Or it may be strategically developed by asking 'advice' from a senior manager throughout the BMI process, leading over time through repeated patterns of interactions, to an embedded relationship on which the team leader (or other team members) can draw for support.

Whatever the origin of the embedded tie, we propose that it is important to have an embedded tie with at least one powerful or resource-holding (or influencing) figure in the organization. Where embedded ties exist, the likelihood of a BMI

team member being able to call in favours or even credibly to promise future favours in exchange for support is significantly enhanced (Moran, 2005; Uzzi & Lancaster, 2003).

P1c: *At the concept stage, teams with members having an embedded tie with at least one higher-ranking individual inside the organization are more effective in the sourcing of political support than teams lacking such connections, increasing performance at this stage.*

Networks and motivation. Moreover, we expect that teams with effective network structures for sourcing information and for gaining political support and tangible resources (i.e., P1a-c), are not only more effective in gathering the resources for successful BMI, they are also more likely to come together as a team. Group members will observe that the correct types of ties are in place to facilitate success since networks have reputational or signalling content (Stuart et al., 1999; Shane & Cable, 2002, Podolny 2001). Observing a positive pattern of ties – for instance, a high range of ties, or embedded ties with external parties or politically important actors – may increase the willingness of team members to work for the BMI group.

At the start of the BMI process, group members need to tap into the goodwill and call upon the obligations of their network contacts in order to source information and other resources—and the more complex the knowledge, the higher the cost of doing so (Hansen, 1999; Centola & Macy, 2007). Increased belief in the likelihood of success, and hence the likelihood that the project will

contribute to their reputation rather than be a blot on their careers, makes it more likely that BMI team members, but also senior managers and external partners of the BMI team, will tap into their contacts' knowledge and other resources, and to share and combine these resources with the team, as the expected returns for them will be higher, even at the cost of discharging past or creating new obligations (Coleman, 1988).

The increased belief in success also increases the belief that an individual's contribution to the team's success will be reciprocated by other team members, possibly in the future after the BMI project has ended. Only if the project continues to exist, accrues additional resources and is a credit to team members' careers rather than a blot on their records will it be likely that team members' contributions to the group will be reciprocated and that they will build their personal stock of social capital with other team members through working on the project. Hence in the presence of the 'right' ties (for success), we expect that team members will be more likely to make a group effort and share and combine information and other resources with other team members, enhancing BMI performance.

The effective mobilization of the team with clear signals that it is an important priority for the managers surrounding the team, for instance having the support of at least one senior manager, leads to more effective team behaviour (Ericksen & Dyer, 2004). Creating such an impetus for early belief in expected future reciprocation is particularly important in the uncertain and potentially contentious context of BMI. A BMI's contradiction of the firm's dominant logic

means that group members may perceive that some in the firm may see the BMI as a threat or a needless distraction from other aspects of the organisation's work, increasing the need to help group members perceive the positive potential of making full use of their network of connections and obligations, particularly if the new business model is positioned by the team leader as a new and different one. An embedded relationship with at least one senior manager is a clear and significant signal in this respect.

In sum, each of the types of links proposed in P1a-c contributing to sourcing of information and other resources, also adds to the perception of a more effective ecosystem of the team, motivating team members and others involved in the BMI process to source, share and combine information and other resources, increasing performance at this stage.

P2: *During the concept stage, teams having a) members connected with a wider range of actors, b) an embedded tie with at least one key external information holder, or c) an embedded tie with at least one higher-ranking individual inside the organization, will be more motivated to source, share, and combine information, increasing performance at this stage.*

Leadership

In the concept stage of BMI, key obstacles for team functioning are, as mentioned, uncertainty (in terms of the purpose and direction of the team; what the new business model will look like; whether it will be successful) and complexity (contribution of elements of the business model, and of individual

team members, to success depends on others). There may be conflicts in the (diverse) team (Jehn, 1995), role and task uncertainty, social loafing of team members, and pressure from day-to-day activities of the core business. As argued above, team members may already be motivated to some extent by the presence of effective social networks, increasing the likelihood of BMI success and future rewards. However, as we discuss below, we expect that there is considerable scope for leaders to additionally motivate team members through leadership behaviours such as vision communication and role modelling, which help to align the team around a common direction and purpose, stimulating (complex) coordination around the joint task and reducing uncertainty.

The team's main focus in the concept stage of BMI is addressing uncertainty by way of sourcing information. In order to allow teams to deal with uncertainty and not be inundated by it, leaders should intervene and provide direction and a sense of purpose. At the same time, leaders should not limit search activities or narrow the scope of team members' focus. Hence, in this phase of BMI, leaders should guide the team but not limit it.

Transformational and charismatic leadership theories (Bass, 1985; Beyer & Browning, 1999; Burns, 1978; Conger & Kanungo, 1987) may inform leaders how to direct but not limit group members. Transformational and charismatic leaders aim to inspire and motivate employees to perform beyond even their own expectations (Bass, 1985). They do so by tapping into – or even transforming – employees' needs, values, and norms, providing long term guidance for employees' daily work. An important process in this respect is

increased (psychological) empowerment of employees (Avolio et al., 2004; Dvir et al., 2002). Psychological empowerment is a motivational construct originating in an employee's perception of having a choice in initiating and regulating actions, having the ability to perform the job well (i.e., self-efficacy), being able to impact the environment and the meaningfulness of the job (Spreitzer, 1995; Thomas & Velthouse, 1990). Thus, by increasing feelings of psychological empowerment of team members, charismatic and transformational leaders may direct and guide employees without compromising their freedom.

By displaying charismatic leadership behaviour, leaders may increase the intrinsic value of effort, accomplishment expectations, and the intrinsic value of goal accomplishment as well as instilling faith in a better future and creating personal commitment to the vision (Howell & Shamir, 2005; Mio et al., 2005; Emrich et al., 2001; Shamir et al., 1993, 1994). Charismatic and transformational leader behaviours can be separated into two classes: role modelling and vision communication (Shamir et al., 1993). Below we will argue that vision communication and role modelling are key leadership behaviors in the concept stage of BMI, and refine this idea further by specifying the messages that leaders should communicate through their charismatic behaviors.

Vision communication. Vision communication can be described as the positioning of a leader's interpretive framework within that of followers (Shamir et al, 1993). Vision communication refers to communicating images of the future of a collective with the aim of convincing others of the merit of the images (Stam et al., 2010a, b). Visions are similar to (task) goals, but they are more abstract and

long term and need not be accomplishable to be inspiring (Kirkpatrick & Locke, 1996). By communicating a long-term vision, leaders provide team members, and others internal and external to the organization, with an idea of the purpose and long-term task for the BMI process, creating a sense of purpose and direction for those involved (Berson et al., 2001).

Hence, vision communication can improve performance (Kirkpatrick & Locke, 1996; Stam et al., 2010a, b) and even lead to venture growth (Baum et al., 1998) and more positive media attention (Bligh et al., 2005). Vision communication may also reduce uncertainty about the BMI and motivate the BMI team to perform better. By providing an image of what to aim for, team members are provided with a common purpose for their work. Although such an image is abstract and vague enough to not restrict team members in their activities (seeing that in this phase of BMI team members may be as knowledgeable as leaders, or even more so) it does provide some direction and therefore reduces the uncertainty that team members may experience and motivate them. This is important because leaders' ideas about BMI are not always superior to those of other team members. Therefore, these ideas should not be dominant in the team to the extent that they restrict expression of other ideas. In sum, a sense of common purpose is important because it reduces uncertainty and may increase the motivation to cooperate for a common purpose, reducing problems of complexity as well.

P3a: *In the concept stage, vision communication by leaders enhances motivation of those involved in the BMI process and therefore increases performance at this stage.*

Furthermore, in the early stages of BMI individuals are not only uncertain about the project and their common and individual tasks, but also about themselves and the group in which they have to work. Leaders may address these issues of complexity (and implied need for cooperation of people around a common task) and uncertainty (Hogg & Terry, 2000; Pratt, 1998) by creating a shared identity and feelings of cohesion (Van Knippenberg et al., 2004). Research shows that identifying with a group or organization may indeed enhance performance (Millward & Postmes, 2010; Van Knippenberg, 2000), organizational citizenship behavior (Barreto & Ellemers, 2002; Dukerich et al., 2002; O'Reilly & Chatman, 1986), and boost self-esteem (Hogg & Terry, 2000).

Vision communication may be critical to such identity work. Many studies have found that leaders may create a common social identity (Lord and Brown, 2004; van Knippenberg et al., 2004), leading Reicher, Haslam and Hopkins (2005) to call (charismatic/ transformational) leaders "entrepreneurs of identity". Vision communication may be an important tool to influence identities of followers (Lord & Brown, 2004; Stam et al., 2010a). For instance, Jansen and colleagues (2009) and Smith and Tushman (2005) argued that visions are crucial for innovation projects, because they create a common identity amongst employees. Shamir, Arthur, and House (1993) state that a way to strengthen the engagement of employees is discussing the collective identity of the company, and to address

the common history of the company, to spell out company norms and values, and to emphasize that both employees and management are members of the same team in vision communication. These effects have been confirmed by both qualitative (Shamir et al., 1994) and quantitative research (Kark et al., 2003). In sum, emphasizing the collective of those involved in the BMI process (team members, other participants inside and outside the organization) through vision communication will help to reduce uncertainty and problems of complexity, and motivate those involved in the BMI process, increasing performance at the concept stage.

P3b: *In the concept phase, emphasizing the collective of those involved in the BMI process in vision communication enhances their identification and hence increases performance at this stage.*

Charismatic and transformational leadership theories suggest that emphasizing a crisis in vision communication may be important to open individuals up for the ideas of a charismatic leader (Beyer & Browning, 1999; Conger and Kanungo, 1987; Shamir & Howell, 1999). Crises come with distress, negative emotions, and feelings of uncertainty and negativity (Dutton, 1986; Madera & Smith, 2009; Pearson & Clair, 1998; Pearson & Mitroff, 1993; Stubbart, 1987). As a result, followers are particularly open to leadership (Shamir & Howell, 1999), and especially to those leaders that are able to provide motivation, inspiration and a purpose (Bass, 1985; Conger & Kanungo, 1988). Hence vision communication calling attention to problems of the status quo, how a new business model might be different from the current situation (discrepancy), and how it can help

mitigate the problems of the entire organization, can help to establish the needed BMI. In doing so, the potential new business model (or the vision for it) can be contrasted with current practices and be presented as a much-preferable alternative to the problematic current practices.

Such urgency and discrepancy can be a major influence for team members and others, both inside and outside the organization. In addition to the team leader, a small number of power holders in the company may be crucially important for the BMI team to access tangible and political resources in the concept stage. It helps if these people are utterly convinced of the usefulness of a new and different business model. Engaging only a limited number of senior managers at this stage, perhaps only one, reduces the likelihood of mobilizing resistance and 'novelty creep,' i.e., the business model losing its radical newness, implying more incremental innovation. By emphasizing in their vision communication how a new business model might be different from current practices, and why it is urgently needed, leaders can give those involved in the BMI process both a better sense of direction and motivate them to contribute to it.

P3c: *In the concept stage, leadership emphasizing discrepancies between the BMI and current practices in vision communication enhances the identification for those involved in the BMI process, increasing performance at this stage.*

Role Modelling. Leaders may not only give a sense of direction by what they say – through vision communication – but also by what they do. Role modelling is, simply put, the leader showing exemplary behaviour. Through social comparison

processes, employees relate their own behaviours to the role model and are inspired to mimic these behaviours (Lockwood, 2006; Lockwood & Kunda, 1997). This inspiration may extend to others involved in the BMI process, both inside and outside the organization, as well.

Through role modelling, the leader provides a point of reference for those involved in the BMI process in terms of behaviour for followers to refer to and display. Role modelling provides participants with an example of how to act and communicates norms, values, and expectations to team members. This lowers feelings of uncertainty about how to behave in the team, demonstrates a common purpose and motivates team members to work for the team (Conger & Kanungo, 1988; De Cremer et al., 2009), reducing problems due to complexity and the implied need for cooperation and coordination in the BMI process as well. Importantly, and similar to vision communication, the purpose communicated by role modelling is abstract and vague enough to give only a general sense of direction without restricting or limiting members in their work activities. Nonetheless it does provide a general sense of purpose that helps the team to come together around the BMI task, motivating the team, and contributing to performance at this stage.

P3d: *In the concept stage, role modelling by leaders motivates those involved in the BMI process and therefore increases performance at this stage.*

Role modelling and especially self-sacrificing behaviour has also been associated with enhanced identification with the group. Self-sacrificing leadership is

defined as “an abandonment of or postponement of personal interests and privileges for the collective welfare” (Choi & Yoon, 2005, p. 52). By putting the welfare of the group above their own, leaders can signal that the group is more important than the individual and that the leader deems the group involved in the BMI process, as a whole, very important. This leads to a higher degree of organizational identification, resulting in better follower performance (van Knippenberg & van Knippenberg, 2005). As the creation of the collective identity is an important goal for leaders in the early phases of BMI, we expect self-sacrificing role modelling to positively affect performance at this stage.

P3e: *In the concept stage, self-sacrificing role modelling enhances identification of those involved in the BMI process and therefore increases performance at this stage.*

Leadership and social networks. Leadership may also promote a better use of a team’s social networks by giving a common purpose to the participants in the BMI process for how to use these networks. As visioning by leaders specifies direction and purpose, charismatic leadership can enhance the effectiveness of sourcing activities. These leadership behaviours may guide a team members’ sourcing activities (suggesting where to go and what to do), without limiting them. Visioning is especially important in uncertain and complex contexts, when the leader cannot possibly guide all activities of subordinates (Uhl-Bien et al., 2007; Shamir & Howell, 1999). In situations such as BMI, leaders cannot possibly oversee all details of the operations and should decentralize decision-making, empowering employees as opposed to explicitly directing them (Galbraith,

1982). Charismatic leadership behaviours, however, guide and align follower behaviour on a high level, without explicitly interfering with the daily practice of employees. Indeed, (transformational and) charismatic leadership is strongly related to empowerment (Avolio et al., 2004; Dvir et al., 2002) and seems to work better as empowerment of followers is higher (Pieterse et al., 2010) or the distance between leader and follower increases (Shamir & Howell, 1999).

We expect that leaders can motivate team members to use their social networks as well. As argued earlier, these people may already to some extent be motivated by the perceived presence of effective social relationships, and their implications for trust/liking or reputation. However, the potential incentive problems in the early stages of BMI: from conflict, social loafing, and the pressure arising from the day-to-day activity of the existing business, are very significant. Potentially beneficial exchange relations within the team, needed for successfully designing and implementing a new business model, may also break down due to internal conflict and the high uncertainty and complexity associated with BMI. Hence, we expect that there is considerable additional scope for leaders to motivate participants in the BMI process and to enhance the performance of the BMI team at this stage.

Group identity work may diminish the problems of conflict and social loafing, and enhance the beneficial effects of social networks on sourcing success. As team members identify with the team, they are motivated to cooperate and to contribute to the team (Ashforth et al., 2008; Riketta, 2005). Charismatic leadership, as an antecedent of identification, can therefore improve the

effectiveness of sourcing and sharing activities. For instance, Beyer and Browning (1999) discuss how Robert Noyce, through vision communication, was able to create cohesion in the American semi-conductor industry and lead different American companies to cooperate and unite against an invasion of Japanese companies in their home market. Furthermore, as argued earlier, emphasizing how a new business model might be different from other practices in the organization and creating a sense of urgency around it, can create an additional sense of direction and motivation of those involved in the BMI process, which may reinforce the effectiveness with which team members draw on their social networks as well.

The same effects that arise from vision communication arise from role modelling. Role modelling, like vision communication, helps to give a sense of direction and may additionally motivate participants in the BMI process. For instance, self-sacrificing behaviours are strongly related to cooperation in teams (De Cremer & van Knippenberg, 2005) and to helping behaviors in teams (De Cremer et al., 2009). All of this may contribute to effective use of a team's social networks, from the perspective of the team members contributing to the BMI process and from the perspective of their counterparts (those they seek to cooperate with, such as senior managers and external partners) who may be motivated by the vision and role modelling of the team leader as well, contributing to BMI success.

Finally, the mere presence of a range of ties of the BMI team to the rest of the organization, including (possibly weak) political ties, may enable a firm's

dominant logic to creep in, promoting incremental rather than successful BMI (London, 2010). However, if the team has a strong identity and vision and a charismatic leader, these ties can be actively used to influence others rather than be influenced and to build support for the novel business model, mitigating the "dark forces" in the organization and perhaps getting them on board, enabling more resources to flow to the BMI team and increasing performance at this stage.

P4a: *In the concept stage, vision communication by leaders strengthens the influence of the range of networks, of the embedded ties to external information holders, and of embedded ties to higher-ranking individuals on performance at this stage.*

P4b: *In the concept stage, emphasizing the collective in vision communication strengthens the influence of the range of networks, the existence of embedded ties to external information holders, and of embedded ties to higher-ranking individuals on performance at this stage.*

P4c: *In the concept stage, leadership emphasizing discrepancies between the BMI and current practices in vision communication strengthens the influence of the range of networks, the existence of embedded ties to external information holders, and of embedded ties to higher-ranking individuals on performance at this stage.*

P4d: *In the concept stage, role modelling by leaders strengthens the influence of the range of networks, the existence of embedded ties to external information*

holders, and of embedded ties to higher-ranking individuals on performance at this stage.

P4e: *In the concept stage, self-sacrificing role modelling strengthens the influence of the range of networks, the existence of embedded ties to external information holders, and of embedded ties to higher-ranking individuals on performance at this stage.*

Depending on an organization's decisions (if there is indeed a formal decision), the project may go on to the next stage, or be killed, stalled, or "sent back" for improvement.

The Development Stage

At the development stage, the direction of the initiative is now clearer (Ruhnka & Young, 1987) and the project has likely been formalized (Bhave, 1994). The outline of the project has been approved (for instance, in the form of a business plan) (Ruhnka & Young, 1987) and the team's task is to execute and launch the initiative successfully. Performance at this stage is likely to be subjective, at least from the organization's perspective. Ultimately, performance is based on the success of launch and the value created as a result. Tasks at this stage may include the development of an IT platform (if part of the business model), or an in-depth market study to gauge potential demand, developing or testing a prototype for the new product or service, or one or more pilots, either as a BMI team or together with internal or external partners. At this stage, the team grows larger, hierarchy and formalization of tasks is introduced (Galbraith, 1982;

Ruhnka & Young, 1987). With the overall direction now clearer, the roles of individual team members in the overall project now need to be clarified as well.

Social Networks

Networks and information. When BMI moves to the development stage, the kind of information needed for BMI success changes as well. A diversity of sources of information becomes less important than depth of knowledge in selected domains. Where at the first stage the focus is on *what* may be possible, now the emphasis shifts to *how* the innovation may be created (Ruhnka & Young, 1987). The focus of the project shifts from sourcing and trying out a wide variety of information to the effective transfer of complex and tacit knowledge to solve emerging issues, problems, and constraints in the development (Bhave, 1994). Fine-grained information transfer is necessary once the task of the innovation team makes a transition from synthesis of others' diverse information to developing a deeper understanding of pools of information necessary to the project (e.g., marketing, technical, financial, possible supply and distribution issues) (Galbraith, 1982), while joint problem-solving arrangements facilitate the 'plugging in' of the innovation team's efforts to draw on and where necessary alter the existing firm capabilities. As has been discussed, embedded ties facilitate such information transfer and problem-solving arrangements.

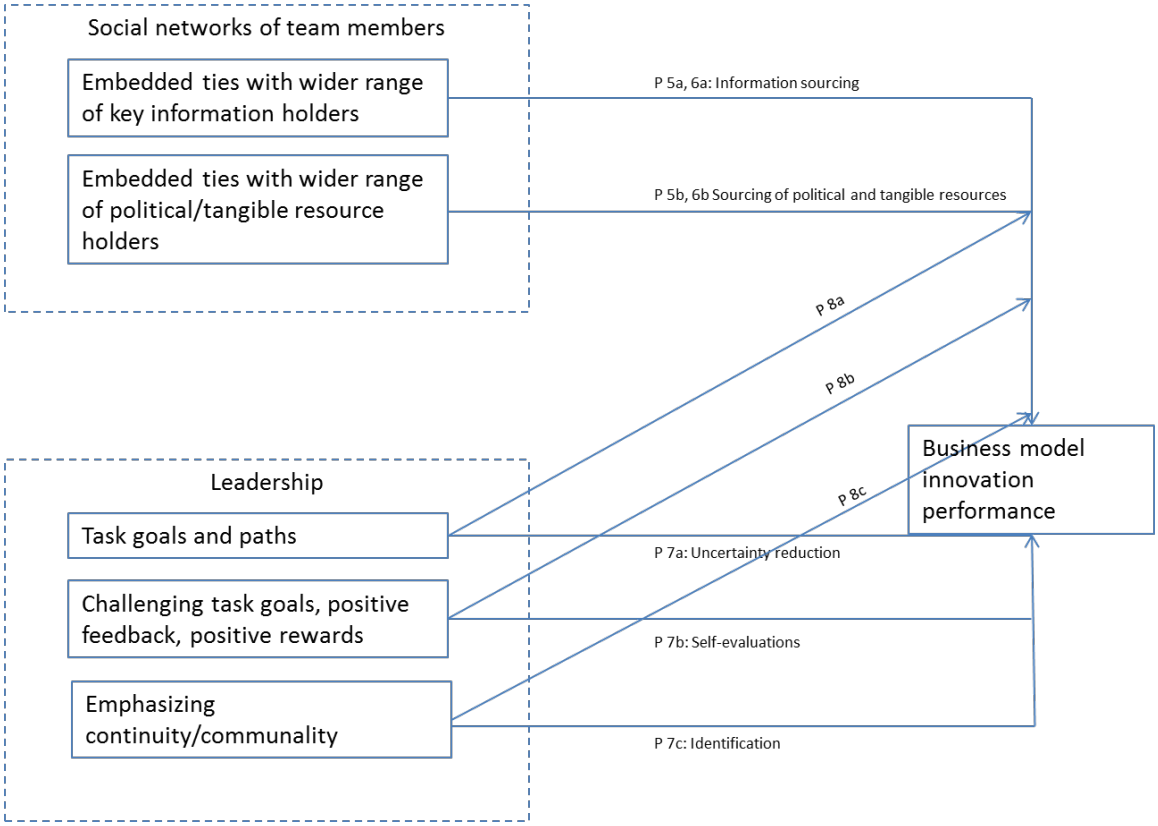
Depending on the specific business model, these embedded ties may connect with various functional units, departments, or business units within the organization, for instance, R&D if a new technology or product needs to be developed, marketing if in-depth market research is needed, the IT department if

a new IT platform is an important element of the business model. The same holds true for external parties; for instance, in-depth relationships with partners (e.g., suppliers, distributors, or in manufacturing) and the implied potential fine-grained information transfer and joint problem solving help the BMI team to adequately address emerging problems and constraints in the development process. Depending on the type of business model, the BMI process may benefit from embedded ties with local community partners with in-depth knowledge of the local social and economic context and with local customers engaged in prototyping and piloting as well.

While embedded ties take more time and effort for team members to develop or to maintain, they also enable the transfer of complex knowledge, to identify and jointly work on emerging problems and constraints, and to co-innovate new solutions (Nahapiet & Ghoshal, 1998; Capaldo, 2007), all of which is important at this stage. This proposition and others about the development stage are also depicted in Figure 2.

P5a: *During the development stage, a greater number of embedded ties with internal and external contacts holding information resources about the new BM are more beneficial for the sourcing of informational resources into the team, improving performance at this stage.*

FIGURE 2
Overview of propositions in the development/launch stage



Networks and political resources. The required political support to obtain the needed tangible resources also shifts at this stage; typically substantially larger investments in terms of people and funding are needed. Where the support of a single champion may have been sufficient during the concept stage, the development stage requires a broader range of support (Burgelman, 1983a, b), including possibly from more senior levels of the organisation, especially if the BMI is going to sit at the 'top table' of the organisation's activities (Anand, et al., 2007). Accordingly, the network features that are required to source intangible and tangible resources and to develop political support must also change.

As a BMI project develops, one of the main threats to its existence or eventual success is over-reliance on a single source of tangible or political support. A single sponsor or financial supporter may be working under exogenous deadlines or resource restraints that do not necessarily accord with the development needs or life cycle of the project (Van de Ven et al., 1999). A single sponsor is unlikely to be able or willing to devote all his access to other, valuable higher-ranked individuals to evangelising for the project, so having multiple sponsors may be the only route to these valuable individuals and the opportunities to leverage resources and relationships to which they have access.

Even if a project survives the concept stage under the protective guard of a single sponsor, when it reaches the development stage it will require assistance from departments or divisions of the company beyond the sponsor's direct control. Projects that are overly identified as coming from a particular organisational context may meet resistance from other areas of the company. A project that goes on too long without attracting the patronage of others besides its founding sponsor may be seen as a "pet project" rather than a broadly supported initiative. The development of a cohort of patrons or sponsors may lead to helpful consensus about the prospects for and importance of the particular innovation as well.

The benefits of having embedded ties with political sponsors extend to external organizations as well. Embedded ties with senior managers of partner organizations (ranging from partner organizations in R&D, supply and distribution, manufacturing, etc.) may facilitate their devoting enough staff,

financial resources, and priority to the development of the BMI process, and support people in their own organization to engage with the BMI team in fine-grained information sharing and co-innovating of solutions around emerging problems. In some contexts, embedded links with leaders of local communities are important for access, support, and learning (prototyping, pilots, developing local distribution and sales) and for trust and acceptance of the organization and its new product(s) as well. Formally,

P5b: *During the development stage, a greater number of embedded ties, with a wider range of internal and external contacts holding political and tangible resources is more beneficial for the sourcing of such resources into the team, enhancing performance at this stage.*

Networks and motivation. More embedded ties of the team, both internal in the organization and externally, will also increase perceptions of success of the participants in the BMI process in the second stage who are therefore more likely to believe their contributions will be reciprocated or rewarded. The team becomes more attractive to remain or become part of, as there is more scope for building links with team members having valuable social ties. More embedded ties with politically higher-ups are also a clear signal of (more) likely success. All of this increases the likelihood that team members are inclined to remain or become part of the BMI team, that people participating in the BMI process will be willing to source (core team members) or supply (their counterparts) to support the process, and to devote effort to sharing and combining information

and resources within the team, improving performance at this stage. This implies, in combination, that:

P6: *During the development phase, a greater number of embedded ties with a wider range of internal and external contacts holding a) key information sources, and b) political, and tangible resources, increases the motivation of those involved in the BMI process, increasing performance at this stage.*

Leadership

As the BMI project moves from the conceptual stage to the development stage, several elements become more established: more people get involved, more information needs to be processed. Indeed, as a function of network changes and requirements, BMI teams are likely become bigger and change in composition over time and across phases of development (Galbraith, 1982; Ruhnka & Young, 1987; Kazanjian, 1988; Kazanjian & Drazin, 1990). As more people get involved, the overall complexity of the BMI project increases; as more parties get involved and need to coordinate roles, the project itself becomes more fine-grained and is divided into smaller constituent pieces. A more formal hierarchy needs to be put in place and the leader will have to start managing people more formally and directly.

Leader goal communication. As tasks become more formalized and the purpose of the team becomes clearer, leaders should display more individually-oriented behaviours (House, 1971). As more members join the team and individual tasks are more detailed and structured, uncertainty diminishes. Hence, the need for

high-level abstract leadership behaviours (like charismatic behaviours) becomes less pronounced (although not completely disappearing). Leaders have more leeway to individually direct members' efforts, and the same applies to (sub-) projects with other parties, inside or outside the organization. We use path-goal theory and transactional leadership theory to provide insight into how BMI leaders can offer such more direct guidance.

Path-goal leadership theory promotes leadership behaviours such as directive path-goal clarification, supportiveness, participation, and achievement orientation (House, 1971, 1996). These behaviours provide structure for followers, clarifying expectations, guiding work, and creating a supportive and friendly work environment. Path-goal leadership behaviours empower followers and encourage them to strive for performance excellence (House, 1996). Clear goals that are hard to reach, yet not impossible to attain, are most likely to lead to goal accomplishment (Locke & Latham, 1994, 2006). The most important effect in the developmental/launch phase is the clarification of expectations of participants in the BMI process and the guidance of their specific efforts toward BMI success. Transactional leadership is oriented to rewarding (or punishing) members based on their accomplishment of task and task goals (Bass, 1985; Burns, 1978).

Similarly to path-goal theory, transactional leadership emphasizes that leaders should carefully explain task-goals to BMI team members and those they cooperate with, both within the organization and externally, guiding them to accomplish these goals. By providing specific individual and (sub-) group task

goals and helping team members to reach these goals, task uncertainty is reduced, while complexity (e.g., how to cooperate with others in the BMI process) is explicitly dealt with. Interestingly, such explanations of tasks and the relationship between these tasks and the greater BMI goals give team members a sense of collective effort that motivates them to excel in their tasks (cf. Shamir et al. 1993).

P7a: *In the development phase, leadership that provides concrete task goals and paths to accomplish these goals enhances motivation and hence increases performance at this stage.*

As the team grows and its structure and tasks become more formalized (Bhave, 1994, Ruhnka & Young, 1987), motivating people becomes more of an individual issue. As the group's identity becomes clearer and leaders manage members more directly, leaders have the opportunity to motivate team members and others within and outside the organization through other means. As the number of tasks increases and the impact of each task on the overall projects becomes smaller, it becomes more important for participants in the BMI process to understand how their relatively small task influences overall performance in order for them to experience feelings of self-esteem (i.e. general positive feelings about the self, Campbell & Lavallee, 1993; for a meta-analytic review, see Judge and Bono (2001.)) Interestingly, self-evaluation may also concern one's place in and relation with the group. For instance, self-evaluative aspects of identity also refer to feelings of respect, the belief that one's status in the group is high (Tyler

& Blader, 2003), which is critical for individual and team functioning (Ellemers et al., 2013).

As more people join, it may be hard to understand one's unique contributions relative to others'. This is important since, if team members and other participants in the BMI process are to successfully perform tasks, they will need to believe in their capabilities to do so (i.e. self-efficacy – the belief that one is able to perform a specific task, Bandura, 1997; For a meta-analysis, see Stajkovic and Luthans (1998)). Both of these issues, self-esteem and self-efficacy, deal with individual self-evaluative aspects of identity – how one evaluates the self – and leaders play an essential role in managing these issues (van Knippenberg et al., 2004). Interestingly, self-evaluation may also concern one's place in and relation with the group. For instance, self-evaluative aspects of identity also refer to feelings of respect, the belief that one's status in the group is high (Tyler & Blader, 2003), which is critical for individual and team functioning (Ellemers et al., 2013). We argue that leaders may influence self-evaluations of team members and others involved in the BMI process through several practices related to path-goal leadership and transactional leadership. By specifying the relationship between individual tasks and overall group goals, leaders create a sense of impact and meaningfulness that is important for individuals' self-esteem (Spreitzer, 1995; Thomas & Velthouse, 1990) and a team's effectiveness (Kirkman & Rosen, 1999). In addition, setting high goals signals that the leader believes in the abilities of the team member and external participants, strengthening their sense of self-efficacy and of goal commitment (Locke & Latham, 2002; Klein et al., 1999). Finally, providing feedback and rewards about

goal attainment shows people that they are taken seriously, enhancing their feelings of being respected (Branscombe et al., 2002; Simon & Stürmer, 2003; Williams & DeSteno, 2008).

Interestingly, group identity development (see the concept stage) is also related to self-evaluations, as feeling part of a group may relate to feelings of pride (Tyler & Blader, 2003). The difference here is that leaders focus on individuals (rather than on groups) to foster self-evaluative aspect of identity. These behaviours are all individualized behaviours related to goal attainment and as such are strongly related to path-goal leadership (House, 1971; House, 1996) and transactional leadership (Bass, 1985).

P7b: *In the development stage, leadership that provides challenging task goals, positive feedback about task performance, and positive rewards upon task accomplishments enhances self-evaluations of participants in the BMI process and subsequently increases performance at this stage.*

We argued earlier that in the early stage of the BMI process, leaders should emphasize discrepancies between the BMI and current practices in the company. There is a caveat however. Solely identifying problems of the status quo risks creating a sense of insecurity and uncertainty about the future of the organization and importantly, individuals' place in the future organization. As the project enters the development stage, the team grows, and it requires a greater variety of intangible and especially tangible resources, involving a greater number and diversity of politically heavyweights, higher up in the

organization. Bigger investments are involved and more external parties. This forces the team to legitimize its existence to a broader set of constituents inside and outside the organization. Only emphasizing how the BMI differs from problematic current practices may be important in the short run, but may not be optimal as the project moves forward. As the project formalizes and increases in scope, size, and reach towards higher levels in the organization, it becomes more important to show how the project links to the overall organization as well.

Specifically, it becomes more important that leaders present a consistent identity of their organization in order to motivate a broader range of followers (van Knippenberg et al., 2004, Shamir et al., 1993) within and outside the organization. Indeed, consistency in leader communication is found to be highly important in the strategy literature (Smith & Tushman, 2005) and the innovation literature (Lynn & Akgun, 2001). It becomes more important to show a connection between the old and the new. By showing how the project fits within a larger picture, the broader narrative of an organization's overall strategy and identity, and how the new business model helps to reinvent and reinvigorate this for the future, the insecurity and the sense of being an outsider is diminished. This is especially important in development stage of the BMI process as more individuals are involved in sourcing tangible and political resources and these individuals need to be convinced of the benefit of the BMI not only in changing the current situation of the company, but also in fitting within the company's overall scope.

P7c: *In the development phase, leadership that emphasizes continuity or commonality between the BMI and current practices strengthens members' common identity in turn increasing performance at this stage.*

Leadership and networks. By showing transactional leadership and path-goal leadership, and specifying which goals to reach and how, leaders can also enhance the direction and incentives of sourcing activities through a team's social networks. Leaders who help team members formulate clear task goals and specify a path for goal attainment leaders can help team members, and those they cooperate with through their networks, to optimally source information. Path-goal leadership and transactional leadership may provide both a sense of purpose and direction and bolster the incentives to reach those goals. Moreover, by emphasizing how the BMI process fits the overall agenda and identity of the organization, a broad variety of participants in the BMI process from different departments, functional units, and at all levels required, may feel more motivated to contribute to the BMI process and provide the required information rather than mobilize the dark forces working behind the scenes to sabotage the new initiative or, more subtly, not contributing to its success.

P8a: *In the development stage, leadership that provides concrete task goals and paths to accomplish these goals strengthens the influence of members' embedded network ties on performance at this stage.*

P8b: *In the development stage, leadership that provides challenging task goals, positive feedback about task performance, and positive rewards upon task*

accomplishments enhances self-evaluations of team members, increasing the influence of members' embedded network ties on performance at this stage.

P8c: *In the development stage, leadership that emphasizes continuity or commonality between the BMI and current practices strengthens members' common identity and consequently the influence of members' embedded network ties on performance at this stage.*

A Dynamic Model of BMI

So far we have developed a two-stage model, where theory and propositions about BMI performance were built on assumptions about different team and task characteristics at the concept and development stage, as implied by innovation management. However, a better understanding of the performance of BMI teams is possible by generalizing our conceptual model to a dynamic model, where team variables in the second period – so far treated as independent variables in the propositions above, e.g., leadership style, the team's social networks – depend on these same variables in the first period in predictable ways, implying a path-dependent trajectory in terms of BMI team characteristics and performance.

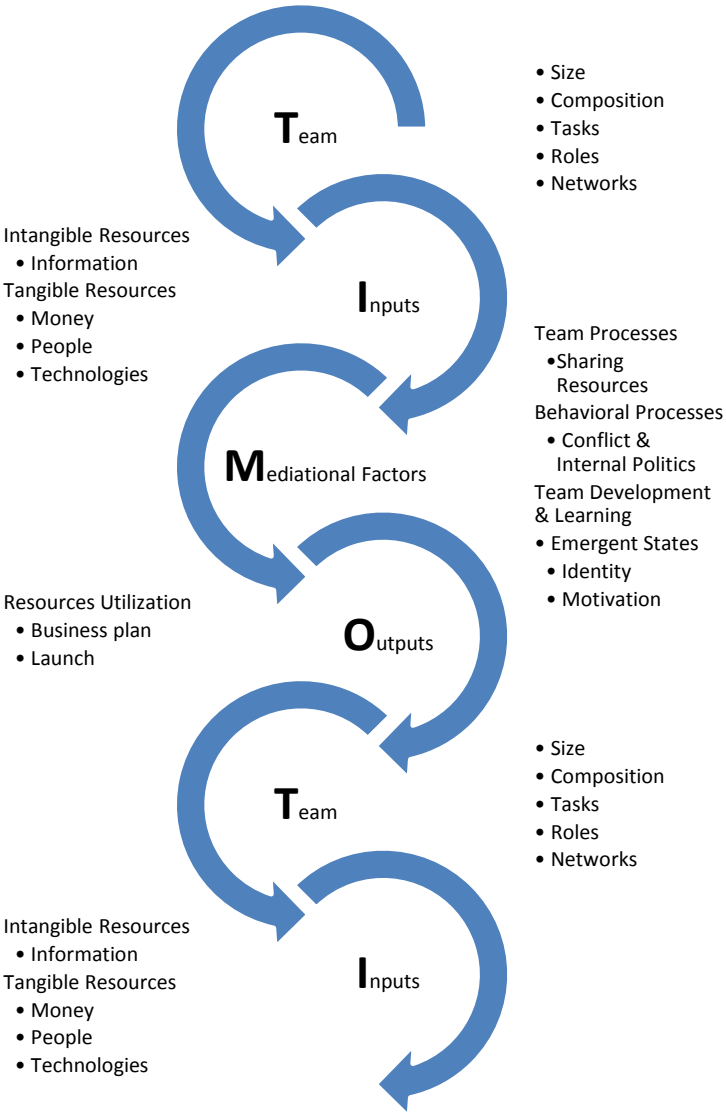
A useful starting point for our theory is Ilgen et al.'s (2005) Input-Mediator-Output-Input (IMOI) model for teams. In our setting, BMI teams start in the first period with an initial composition and size, tasks (e.g., business model design) and roles (e.g., leadership behaviours such as charismatic or transformational leadership), and in-built access to social networks (characterized by range of

networks, with whom, with what tie characteristics). These factors facilitate the flow of intangible (information) and tangible (money, people, technologies) resources into the team, comprising the inputs (I). As in Ilgen's model, these inputs cue mediational factors (M) – in the form of team processes (such as sharing of resources, building of networks), behavioural processes (such as conflict and internal politics), and the emergence of identity and motivation (Marks et al., 2001). This leads to team outputs (O), which depend on the specific task of the team but may be some form of resource utilization, e.g. a business plan (Galbraith, 1982; Ruhnka & Young, 1987; Kazanjian, 1988; Kazanjian & Drazin, 1990). In established organizations, these outputs are typically subjected to higher-level decision-making, e.g., reject, hold, or fund the initiative for the next stage. These outcomes, in turn, influence the starting conditions or inputs (I) for the development stage, together with additional resources implied by a positive decision in terms of funding and staff. These starting conditions (in terms of team composition, tasks and roles, team identity, etc.), together with mediating factors (M) in the form of team processes (such as conflicts and internal politics), will again influence team motivation, and so on.

Interestingly, IMOI models don't distinguish between changes in work input and changes in the team itself. In the context of BMI, not only do outputs in terms of work activities (e.g., information, funding, more or different people, technologies) provide inputs for the next stage but also, for various reasons, *the team itself* will change over time: the number and type of members, their roles and tasks, the type of networks of the team, with whom and for what. First, as the project develops, a broadening scope and size may create a need for more

tangible and human resources, requiring a change in the composition and size of the team. Second, as more human resources need to be managed, team members are likely to experience a shift from conducting search to more managerial tasks. Third, members may develop new ties inside or outside the organization, or weak ties can 'thicken' into embedded ties, or new team members may add ties. Finally, team members may leave due to illness, shifting priorities, or differences of opinion. For all these reasons, an adequate modelling of our setting requires adding a "T" (team size and composition, including member roles, such as leadership characteristics, social networks of team members) to Ilgen et al's (2005) model. Hence, we propose for settings like ours, a model that distinguishes between team changes and work input changes: a Team-Input-Mediator-Output-Team-Input-model, or TIMOTI. Our dynamic, behavioural team model of BMI is depicted in Figure 3.

FIGURE 3
Overview of the dynamic model of BMI teams (TIMOTI)



It is straightforward to illustrate the path-dependency of our model. Suppose, for instance, a small team in the concept stage with a charismatic leader emphasizing the collective in vision communication, reinforcing the team's sense of a common identity and purpose, motivating them to use their ties with higher-ranked managers and with external parties, and to share and combine ideas,

information and other resources within the team, when developing a business plan. This may lead to a high-quality business plan which gets approved, but also forms an excellent start for the development stage, with a core team with a common identity and purpose and networks that may still be intact, supplemented with new team members (as part of the additional support), all of which may increase the likelihood of success in the development stage. In contrast, an ineffective leader in the concept stage with a poorly motivated team may deliver a weak business plan. If at all approved, this team will start the development phase weakened in terms of size, networks, identity and purpose, and with a sub-optimal plan, all of which may contribute to failure during the development phase.

This is just one example of a path-dependent trajectory. The TIMOTI theoretical framework may be used to develop additional theory and propositions on how and why given team characteristics (T) at the concept stage, including team tasks and roles, such as leadership characteristics, produce inputs (intangible and tangible resources) which, through mediating factors (M) like identity and motivation produce outputs (O), which in turn influence team characteristics (T) at the development stage (new tasks and roles, including new leadership roles). In other words, TIMOTI offers a new theoretical *platform* for studying BMI, i.e., for developing new theory and propositions on the path-dependent process of how and why BMI teams contribute to performance. We hope our new theory will inspire others to develop such work.

DISCUSSION AND CONCLUSIONS

We developed new team-based theory on the BMI process and performance, synthesizing insights from innovation management, social psychology of leaders and teams, and social network theory. We went on to develop a new theoretical framework, TIMOTI, conceptualizing BMI as a team-based path-dependent process. Given that the field of BMI is currently taking off, we believe it is particularly timely to heed Whetten's (1989) call to offer a new theoretical approach for studying not only *what* influences BMI performance and *how*, but also *why* (i.e., a new theoretical logic).

We believe our theory also adds to the corporate venturing literature and to the ambidexterity literature. Previously, researchers in corporate venturing (Galbraith, 1982; Burgelman, 1983a, b; Garud & Van de Ven, 1992; Bhave, 1994; Archdivili et al., 2003; Cornelissen & Clarke, 2010) and the ambidexterity literature (O'Reilly et al., 2009) have also studied how new ventures emerge in established organizations. Some studies examined the process of developing new ventures using rich case study analysis (Burgelman, 1983a, b; Garud & Van de Ven, 1992). Burgelman (1983a, b), for instance, studied where new ventures come from in a large corporation such as Intel and how they get funded and ultimately legitimized as part of the corporate strategy. Other studies examined conditions for successfully developing new businesses away from a firm's core business, such as the vision of corporate leaders or CEOs (Smith & Tushman, 2005; Jansen et al., 2009), or effective alliances or networks with external partners (Lin et al., 2007). The idea of process is at the core of the ambidexterity

literature (Gibson & Birkinshaw, 2004; Raisch & Birkinshaw, 2008; O'Reilly & Tushman, 2008) although this (firm-level) research typically reduces the entire BMI-process to a single concept, i.e., exploration. None of these literatures however developed theory at the micro-level of how and why external *team* factors (types of social networks, with whom, and for what) and internal team factors (e.g., types of leadership) interact to influence BMI performance, and how this varies across different stages of BMI. Hence, we believe our new theory adds to these existing research streams.

In the new product development literature, a qualitative study by Ancona and Caldwell (1992) observed that "ambassadorial" activities of new product development teams, information seeking, co-ordination of activities and 'guarding' of the innovation process within a team were key to success. However, these researchers did not consider the interaction of team processes and these ambassadorial activities. Although NPD teams generally do not experience the complexity and uncertainty that BMI teams experience, we hope our theory will inspire new team-based theory of radical product innovation (i.e., NPD that is relatively uncertain) as well.

We believe our work also contributes to social network theory. Social network theorists have already examined which types of networks facilitate innovation (Uzzi & Spiro, 2005) and even focused on teams (Reagans & McEvily, 2003). However, as Kilduff and Brass said in their recent (2010) overview of social network theory, "(p)erhaps the most frequent criticism of social network research is that *it fails to take into account human agency*. (italics added)... and to

show how “intentional, creative human action serves in part to constitute those very social networks that so powerfully constrain actors in turn.” New theory as developed in our paper on how and why specific leadership styles strengthen a team’s common identity and purpose, motivating team members to better use their existing social networks, is perhaps one promising opportunity to begin to fill this gap.

Likewise, social psychologists have studied team creativity and innovation as output variables, but did not examine how and why a team’s internal processes (e.g., team leadership and identity formation) interact with external processes such as the flow of information and other resources through its external networks. We developed such new theory for the context of BMI: on how social networks and leadership styles interact in terms of their influence on performance and why, as teams move from BMI concept to development.

More fundamentally, we believe TIMOTI offers a new theoretical *platform* for studying how and why BMI teams contribute to performance, and perhaps when and where (i.e., under which conditions, cf. Whetten, 1989). TIMOTI could, for instance, inspire new theory and propositions on additional team tasks and roles such as shared leadership (Pearce & Conger, 2002) or additional mediating factors such as team development and learning. The model could be expanded to stages such as “launch” and “scaling up.” Insights from other disciplines than innovation management, social psychology of teams and leadership, and social network theory, could be added as well, expanding the model in fundamental ways. We hope our theoretical framework will inspire such new theory.

We hope our new theory will inspire empirical work as well, theoretically extending and empirically testing the theory and propositions developed in this paper. We strongly encourage qualitative work as well. We think we argue on good grounds that social networks and leadership are important in BMI settings; however, qualitative research may reveal other, and perhaps even more important drivers of the BMI process and performance at the various stages.

Such qualitative research is particularly important when studying non-traditional settings for management, i.e., other than the West where most of our theories come from, including our theories on teams, leadership and social networks. Qualitative work on BMI in Asia, Africa, and South America would add much to our study (Barkema et al., 2012). Particularly, if such work extended to examining BMI in organizations which are currently virtually ignored by management researchers, such those serving the 4 billion people at the "economic base of the pyramid" (George et al., 2012). Qualitative work on BMI, including ethnographic studies, on how new businesses evolve over time in congruence with social impact (and what this means for recipients) might potentially offer important new insights to the field of BMI, the broader field of management, to the social psychology of teams and leadership and to social network theory as well.

Chapter 5

How Projective Agency Influences Action in Social Networks

Abstract: This study of 37 London-based venture capital partners and associates (VCs) inductively examines their espoused 'networking strategies'. By examining the changes in these strategies from VCs' entry into the field across their career, and by considering these trajectories in the light of the status of the VC's firm, I develop grounded theory about actor behavior in networks. The derived theories are novel, in part because they are concerned with 'projective agency' (Emirbayer & Mische 1998): how actors' plans, beliefs and attributions about the future influence their choice of networking actions. Where actors' strategies and tactics diverge, I find and posit three logics underlying their choices: a logic of reputation diffusion, a logic of "right conduct" and a logic of differentiation from peers. I also examine VC's network-related cognition, by considering the metaphors through which they conceive of their networks. Efforts to 'put the agent back in' to network theory are argued to be advanced when researchers focus on questions of the actor's motivation for selecting a particular networking action and in particular on 'projective agency'.

When Mark Granovetter published his seminal "Getting a Job" in 1974, his intention was to socialize the way we understood the search for employment. He found that in the labour market for professional, technical and managerial staff, previous, economically derived models of search by jobseekers were inadequate: people and jobs were matched through a mutual search process

engaged in by would-be employer and jobseeker, a process shaped by the actors' pre-existing networks and chance as much as or more than any actor agency. He found that those jobseekers whose search patterns were less deliberate were more successful—in essence, that higher status actors had less need to engage in active search, and that when they did decide to change jobs, they secured better outcomes.

In the intervening 40 years, this model of a socialized matching process, arising when there is both egocentric uncertainty for the seeker and altercentric uncertainty for the sought (Walker et al, 1997, Podolny, 1993, 1994, 2005) has assumed greater significance in our understanding of organisations and change. This is partly because aspects of economic life inside (Tsai, 2001, 2002; Kilduff & Tsai, 2003; Reagans & McEvily, 2003; Burt, 2000, 2004; Oh et al, 2004; Obstfeld, 2005; Kleinbaum, 2012) organisations have moved away from hierarchy to networks; it is partly because often, relations between (Cook, 1977; Powell et al, 1996; Zaheer et al, 2000; Prahalad & Krishnan, 2008, Baum et al, 2005, Ahuja et al, 2012) organisations have moved away from a market basis to a network basis; it is partly because our understanding of the social networks which always existed alongside both types of relationships has become clearer (Padgett & Powell, 2012). Both inside firms and between them, innovation activity's interaction with networks (Ancona & Caldwell, 1992; Ahuja, 2000; von Hippel, 2005; Birkinshaw, 2006) has been much studied, as the challenge of navigating the uncertainty that always accompanies innovative activity is often addressed by participants' use of social cues to evaluate and determine potential future value.

However, a structural model showing how matching takes place, and its antecedents, leaves many questions of agentic action unanswered. Powell & Padgett (2012) epigrammatically argue that "in the short run, actors create relations; in the long run, relations create actors." A socialized matching model helps us see how relations constrain and thus "create" actors: but rounding out a theory of action in networks requires that we develop a rich understanding of the short-run side of this divide. After fully allowing for structure's influence on initial network position, what choices, decisions and behaviors by actors lead to variance in outcomes? How does the high-status seeker trigger approaches by desirable would-be employers, or ensure her reputation for high-quality work is known and understood by the relevant part of her network? How (and under what circumstances) does the low-status seeker successfully compensate for gaps in or blots on his credentials or reputation? As our understanding of the structural antecedents of network outcomes grows, the clamour of those who ask that we incorporate an understanding of agentic action back into our theory of networks has also grown. Individuals and firms ask 'how can I achieve a position of network advantage' (Burt, Kilduff & Tasselli, 2013)? Managers ask, 'how can I facilitate emergence from my network, or orchestrate collaboration, beneficial to my firm' (Greve et al, 2013)? Scholars ask which aspects of agents' choices and behaviours are significant enough to surmount the structural constraints of the networks in which they are enacted (Burt, Merluzzi & Burrows, 2013; Gargiulo & Ertug 2014), and how actors can shape networks and through them influence outcomes (Baum et al, 2000; Smith & Autio, 2011; Hallen & Eisenhardt, 2012). As we try to increase our understanding of change and

dynamics in networks, the temporal embeddedness of agency—in the actor's past and in her past network connections (Soda et al, 2004), *and* in the future the actor sees for herself—has a significant contribution to make.

The pursuit of an understanding of individual differences, leading in turn to an understanding of short run agency in network contexts, is in its relatively early stages. It is a challenge, not least because network scholars are using tools and theories derived from a structuralist understanding of the world; using such tools to flush out individual action and choice is sometimes an awkward fit: if a study's dependent variable is network structure, then in order to measure the effects of individual choices within the structure, one must 'peer through' the deterministic aspects of the structure (such as the stratification of the network and thus of tie formation opportunities through status ordering) and of generalized mechanisms such as homophily, preferential attachment, reciprocity, imitation, balance, transitivity, and the repeated activation of embedded ties, to find the indeterminate moments when choice influences outcomes.

The majority of prior work on individuals in networks has taken one of three approaches.

Firstly, there is a group of studies (e.g., Burt et al, 1998; Kalish & Robins, 2006) that take some aspect of relatively stable individual difference, such as personality, and extrapolate the influence it has on network outcomes. Notable findings from this thread are those suggesting that high self-monitors achieve

advantageous network positions (Mehra et al, 2001; Kilduff & Krackhardt 2008; Sasovova et al 2010) and that they have superior network acuity/perception (Casciaro, 1998). Some research examines stable individual endowments such as sex (Brass, 1985; Ibarra, 1992) and draws strong inferences about the mechanisms through which individual difference leads to outcomes in the form of network structure. Recently, Burt (2013) proposed the notion of a "network personality" which leads actors to create similar networks in each *ab novo* setting in which they find themselves.

This research, unpicking the influence of individual difference on network outcomes, has been vital in establishing the case for the significance of such difference, *presumed* to drive divergent behavior in otherwise structurally equivalent situations. But it does not uncover the short run behavior itself: while the post-analytical theorizing as to the mechanisms involved may be well-reasoned and convincing in this work, it does not examine agency directly. Emirbayer and Mische (1998) propose that scholars examining agency should consider three distinctive (and empirically linked) dimensions of the construct. In their conception, these are "iterational", "practical-evaluative" and "projective" agency. The first of these, "iterational" agency, consists of the routines which, given an agent's social situation, she selects in order to achieve her ends, "sustaining identities, interactions and institutions over time" (p971). One could consider that these routines have been established in the *past*, and their persistence or diminuition/extinction in the present reveals the adaptation of the iterational agent to her environment (cf Garud & Rappa, 1994). The second constituent dimension, "practical-evaluative" agency, relates to the

normative judgments and decisions "in response to the emerging demands, dilemmas and ambiguities of *presently* evolving situations." (Emirbayer & Mische, 1998, emphasis applied.) Finally, "projective" agency is the "imaginative generation by actors of possible future trajectories of action, in which received structures of thought and action may be creatively reconfigured in relation to actors' hopes, fears and desires for the *future." (ibid,* emphasis applied.)

The second strand of research on individuals in networks, which "search for agency" by directly examining individual behavior, are substantially based on a search for the "iterational" dimension of agency.

Exemplifying research that identifies iterational network routines is Bensaou et al (2013), which examines networking behavior among employees in a firm of accountants, and through cluster analysis finds that some consider networking a critical ongoing part of their roles, some a means to an end to be employed as necessary, and that some eschew overt networking behavior. The authors argue that this divergence results from the employees' schema and values about the appropriateness of such behaviour. Vissa (2012), in a study of entrepreneurs' networking behavior, discovers a divide between networkers who attempt to make direct contacts with potential customers and those who build referral networks, and examines how the choice dynamically affects the shape of their network and the ties they seek to form. Illuminating divergent behavior in networks can provide an important jumping-off point for examining the interplay of individual behavior and structural forces. And, routines that are artefacts of social pressures may possess a certain stability that makes them

persist and be visible to the researcher as apparent evidence of agency through the deterministic cloud of contextual factors. But a focus on identifying and considering the impacts of routines established by actors in itself does not do much to advance the search for how individual action leads to network change. Routines established in the past, however divergent among a population of actors, have been constituted as a response to the structural conditions of the past, and their path dependency, far from helping establish the role of individual action, demonstrates the opposite: how agency is submerged by its context. Granovetter (1974) opens his study by identifying the paths available to actors for job hunting: applications in response to advertisement, speculative direct applications, and personal contacts. But fundamental to the socialized matching model he depicts is that the choice between these paths, which had previously been modelled by various labour market economists as one of rational evaluation of the direct and opportunity cost and likely utility of each approach, is in fact driven principally by the quality of one's contacts and the search behavior of the employing counterparts.

The third strand of research into individual behavior in networks examines individual problem-solving in networks, and uncovers divergence in how actors deal with present ambiguities—in other words, questions of practical-evaluative agency. Hallen (2008) proposes that there are periods of relatively "low network determinism", in which dichotomous, network-shaping outcomes are possible as a result of more or less effective or efficient individual action. Studies that seek to pinpoint such moments, and highlight ineffective or effective action in the crisis, typically focus on the decision-making of network actors and

their consequences. Such studies often derive from the entrepreneurship literature: Santos & Eisenhardt (2009) show entrepreneurs in nascent fields forming alliances with their future potential rivals with the effect of slowing down their rivals' competitive response; Hallen & Eisenhardt (2012) show entrepreneurs forming relational ties with a range of potential investors and using an event in the development of their venture to 'trigger' an auction among them. Ancona & Caldwell (1992) introduce a taxonomy of network behaviors by innovation-team boundary spanners which they argue are most effective in certain configurations. Lingo and O'Mahony (2012) show network brokers (Nashville music producers) navigating and adjudicating ambiguous claims regarding the legitimacy of actions in their purview in order to successfully complete projects in which they are engaged.

Of the three strands of research discussed, examinations, such as these, of how experts induce catalysis (the metaphor is Hallen and Eisenhardt's) in their networks, are most direct in investigating "how" (cf Whetten, 1989) individuals make a difference to their context and thus, I argue, advance us furthest in understanding how to tackle endogeneity problems in studying networks.

The present study sits closest to the third strand of investigation and seeks to uncover network problem-solving, practical-evaluative action. Through its approach, it also exemplifies how the projective dimension of agency could be actively considered in individual-focused network research and the benefits this could bring in richer theory. Whetten's (ibid) call for theory to consider "why", when applied to Emirbayer and Mische's conception of agency, suggests

researchers could consider not only why past iterational routines have developed, and why particular actions or configurations of actions are selected to attack present challenges, but also why actors make certain future-oriented strategic choices in network development and shaping[1]. Questions about how goals, preferences, beliefs, emotions, interpretive schemas, aspirations to influence connections and attributions about enabling and constraining aspects of ego networks, may lead to differential behavior and superior performance, and to advantageous changes in network position and advantage, would all be salient in such an approach. The dynamics of such attributions and their influence on behaviors could also become important objects of study. Apart from the continued need in a "networked world" for an improved theory of action in networks, the introduction of the concept of "social capital" into non-academic currency (Putnam, 2000), and the advent over the past ten years of online social networks have arguably (Fraser & Dutta, 2010) have made the notion of strategic, future-oriented management or shaping of one's overall social networks more salient in managers' minds—so such theory may also be timely (Abrahamson & Fairchild, 1999).

The purpose of this paper is to examine behavior in networks and to extend thinking about agentic action in networks beyond the current view, which

[1] There are a few studies examining firm strategic action in networks: Baum et al (2003) proposes strategies of 'insurgent partnering' by low status banks and 'control partnering' by high status ones; Gompers (1996) proposes VC firms with a limited track record and low network centrality take a more short-termist approach to their invested firms, in order to establish reputation on which to trade (though see discussion of an alternative interpretation of this study in 'Settings' below.) Few (if any) studies in the field of management directly examine *individual* strategic action in a network context. However, it is notable that many—possibly even the majority—of serious academic investigations of strategic action by firms in networks have been produced in the form of conceptual papers (Ibarra, 1993; Gnyawali & Madhawan, 2001; Koka et al, 2006; Dhanaraj & Parkhe, 2006.) This is perhaps a telling indicator both of the ongoing significance of untangling choice and context, and of the practical difficulties of investigating the phenomenon directly.

focuses primarily on identifying routines, to consider future-focused, strategic thinking and acting by networked individuals. In particular, I explore how VCs, employed by firms of variable status:

1. Allocate time between different ties and different categories of ties, selecting whether to "hunt" for new ties or to "nurture" or "harvest" the existing ones?

   When "hunting", how do brokers

2. Decide upon particular alters as potentially fruitful connections?
3. Approach new prospective alters: what tactics are selected for forming relationships, and what efforts are made to influence or determine the basis (e.g., social, quasi-social, transactional, multiplex) of the relationship?

   When "harvesting", how do brokers

4. Select the desired content and affect of their communications with their ongoing alters?

   Once I had begun to analyse the data, an additional question emerged from the analysis. How do brokers

5. Take the time horizon of their activities (the cycle speed of the types of transactions they conduct) as a guide to appropriate action?

These choices are constrained (Gulati and Srivastava, 2014) by the information and other resources available to the actor, by the norms and expectations derived from the actor's social position, by the actor's skill in

taking advantage of the choices, and her beliefs about the likely outcomes of the potential network-altering courses of action.

Hunting and Harvesting

The first of these five questions: the selection of "harvesting" strategies (exploiting opportunities from current network ties) or "hunting" strategies (reaching to new ties) is a significant puzzle in the existing literature. Powerful forces drive 'hunting' behaviour by brokers. Greve et al (2013) show the pull of 'greener pastures' in decisions to terminate ties, and Baum et al (2012) show the decline over time in returns to bridging, suggesting moving on is fruitful. Burt (2010) fingers social comparison and the need to have and refresh status in order to exercise brokerage as the motive force, suggesting moving on is necessary. Vissa (2012) highlights the search for complementary resources, suggesting moving on is driven by task contingency. Burt (2004) and McEvily et al (2012) point to accumulating knowledge and brokerage skill, suggesting brokers can enjoy a 'return to knowledge' from moving on. Levin et al (2011) show how brokers build trust dyadically rather than through closure, and Sasovova et al (2010) how high self-monitors can make appropriate self-presentations, so they can move on without paying the full liabilities of new relationships lacking triadic connections. Mariotti and Delbridge (2012) show how potential and former ties make up, with existing ties, a portfolio (cf Ozcan and Eisenhardt, 2009) of options, suggesting the right strategy is to optimise that portfolio.

Yet we know brokers sometimes 'stick around'. Obstfeld (2005) and Lingo and O'Mahony (2010) provide different stories about an orientation and a task contingency basis for boundary-spanners to create closure rather than moving on. Knowing that brokers can sometimes see benefits from enriching their local structure instead of 'hunting' has important implications for organisations, which require brokers not to be selfish or anti-social but collaborative and co-operative. Burt's work highlights that the opportunity of brokerage is rent extraction– some of the rent is extracted from the organisation; cf Fleming et al's (2007) concerns about problematic gatekeepers preventing innovation. Ancona and Caldwell (1992) note that to be successful, innovation teams need reach a point where they stop scanning and start building. Uzzi and Spiro (2005) and Uzzi (1996) point to the role of embeddedness and medium-density local structure in successful collaboration. Fleming and Marx (2006) argue that brokers are poor at executing and diffusing the ideas they work on, because of their locally thin social capital. Centola and Macy (2007) highlight the importance of high bandwidth to diffusion of complex information. Reagans and McEvily (2008) show how local density provides the venue for diversity's benefits to manifest themselves in execution. In all cases, the actions taken may or may not contribute to collective outcomes (Coleman 1988) as well as individual objectives (Burt 2000).

I also consider how these behaviors change according to the stage of the VC's career and how the progress of that career influences the chosen behaviors.

The setting is the venture capital industry in London. It is an attractive industry for this study, because VCs believe that their success depends on their ability to form connections with the right ventures for investment, the right syndication partners with whom to co-invest in ventures, and the right complementary service providers and advisers who can add value not only to their own efforts but to those of the firms in which they invest. So, I expected to find the theoretically interesting activity being carried out at a high level of intensity; or, in other words, I expected to find sophisticated networking strategists, who viewed their ability to manage and shape their networks as a core skill for success. It is notable, however, that, just as Granovetter was surprised when many of the professional, managerial and technical workers he studied did not, in practice, have a sophisticated story to relate about their career development and job search practices, so I found that just under half of the informants to this research either expressed considerable anxiety about whether what they had to say about how they approached networking approached the level of a "strategy", or simply stated that they did not consider that they had a networking strategy.

The underlying logic of the research is to develop grounded theory (Glaser and Strauss, 1967) based on insights derived from the identified networking behaviours. Informants were asked to discuss their networking activity when they first entered the VC field (which in all cases followed a previous career in another industry) and their more recent or current networking activity.

The major results from the study are theoretical insights concerning the choices actors made about their networking activities.

Firstly, I found that actors of middle status, who faced 'fear of missing out', faced greater uncertainty and followed more divergent approaches to building their networks than those of highest and lowest status.

Secondly, I found that when actors entered new domains, they either followed associates of theirs who had moved more aggressively and who could provide them with reputation, information and resources in the new domain, or made sure to enter as early in the development of the domain as possible in order to act as "pioneers" of the domain and avoid damage to their status from being perceived as a bandwagon-jumper.

Thirdly, I found that, as expected, status ordering constrained both available network opportunities and shaped actors' view of their best opportunities—but that responses to these constraints varied in terms of how networking "venues", choice of partners were selected. These divergent responses arose from three "logics": a logic of spreading the actor's reputation; a logic of initiating effective relationships with alters through signalling "right conduct"; and a logic of differentiation.

Fourthly, I found that actors engaged in "threshold thinking"—building towards a desired networking goal through a set of sequential steps.

Fifthly, I found that the cycle speed of deal identification and consummation in different parts of the VC industry influenced the strategies and tactics chosen by individuals.

The primary contributions of the paper are:

*to provide a theoretical platform through which to enable future empirical testing of effective networking tactics and strategies by individuals. By providing a partial typology of short run networking strategies and tactics used by actors who 'network for a living', and proposing contingencies regarding the links between these strategies, actors' network setting and actors' attributions and beliefs, I hope to advance the "search for agency" in networks.

*to propose that a focus on 'projective agency' and its link to behavior is a potentially valuable way to speed up the hunt for theoretically and practically significant findings in this arena.

Next, I describe the setting, and what is known about the setting from the venture capital literature. Then, as normal with inductive research, I discuss the qualitative method used and its utility in theory-building. I then describe the data and the insights derived from that data, and conclude by tying back these findings to the broader theory-development effort.

SETTING—The Venture Capital Industry

The Venture Capital industry is densely connected and relies extensively on referrals and strong social ties between its investors (Fried & Hisrich, 1994). Network centrality is linked both with portfolio performance and the likely survival of portfolio firms (Hochberg et al, 2007). Its dense clusters raise barriers to entry: Hochberg et al (2010) show how tightly networked geographic VC clusters impede entry by other firms into their geographical

markets, and show that entry by outsider firms is only normally possible through reciprocity: an outsider allows and establishes links with a multi-sited firm in its home market (often with difficulty and while experiencing temporary sanctions from its local counterparts), and is then able to take advantage of reciprocity in entering a foreign market. In such densely clustered markets, startups get worse terms. Inderst and Muller (2004) show how 'passing deals around' among central VC players limit a venture's search time and effort, reducing the likelihood they will ever approach outsiders for funding and thus competition to provide funds.

Yet within this density, the industry is also stratified (Elango et al, 1995, Casamatta & Haritchabalet, 2007) and characterized by status ordering (Podolny, 2005)— the track record of firms and their partners determines their ability to raise money from Limited Partners (LPs) (Gompers & Lerner, 2001) and thus, in functional terms, the size of their investment pots.

One of the most significant cleavages is between investing firms which specialize in early stage investments, when ventures have not yet secured market traction with customers and require relatively small investments to progress their ventures to further milestones, and those firms which specialize in later stage investments in which the market potential of new ventures' offerings are proven to some extent (Elango et al 1995) and larger sums are needed to "roll out" the venture's business model. The networking and relational behavior of small and early stage-focused VC investors and large, later stage-focused investors differs markedly (Gompers, 1995, Hochberg et al 2011), as one might expect and indeed

as the findings of the present study confirm. Newcomer firms who do not wish to remain small/early-stage (some claim they intend to remain specialists in the early stage) engage in a variety of behaviours designed to build their reputations. One example is the 'grandstanding' described by Gompers (1996), bringing their invested firms to an IPO (initial public offering in the stockmarket) as quickly as possible[2]. Such a track record is needed not only to attract more deep-pocketed LPs, but (Hochberg et al 2007) to build the future ability to invite counterparts into joint investment/syndication deals (rather than only to await others' invitations), and to improve more generally the VC firm's network centrality.

In describing what we already know about the networking behaviours and context of venture capital partners and associates, we break the investment process down into three partly overlapping phases of activity: scanning for opportunities; matching and negotiating with an entrepreneurial team over a desired investment; and, syndicating investment rounds with fellow VC firms.

Scanning—how do VCs select investment targets?

VCs are attempting to create a portfolio of investments, in the knowledge and expectation that only some will yield a positive return. The uncertainty in the early stage of the venture development process is profound—VCs do not know

[2] The paper positing this 'grandstanding' phenomenon is one of the most widely cited in the entire VC literature; however, if we consider the VC-venture market a matching process, and one driven by omnidirectional status signals, we must also at least consider the possibility that the negative status marker associated with early-stage investment from a smaller, younger VC firm creates a path dependence: that the costs for a venture which has, early on, accepted 'low status money', to later trade up to 'high status money' compare unfavourably with the costs of achieving an IPO, albeit on average a smaller one than might have been achieved by ventures who followed the royal road from the beginning of their journey. As always in markets where socialized matching takes place, one must be careful to avoid the fallacy of considering that either side is the principal driver of the process.

the risk associated with the ventures they are evaluating and seeking to back. This is not primarily an informational asymmetry—founding teams may know the truth or falsehood of some of the claims they make in order to secure support (Amit et al 1998, Cable & Shane 1997), but like the VCs, they are unable to model the likelihood of their own success (Cooper et al 1988, Cassar 2010, Dushnitsky 2010). While with the benefit of hindsight we can discern evidence of "sorting" skill among VCs (Sorensen, 2007), through which 'smart money' evidences itself by choosing good ventures to invest in, the knowledge of smart money's theoretical post hoc existence is not of much practical help to the VC in the effort to be smart. Nor, indeed, is experience in the market a guaranteed positive—Shepherd et al (2003) show that beyond 14 years of experience, typical individual VC performance actually declines overall.

There are three principal factors identified in the literature as influencing the fit with a particular investment target: reputation, beliefs about the value of certain traits and behaviours, and expertise.

Fit with reputation. As the "pipes and prisms" (Podolny, 2001) conception of the role of network ties in markets suggests, in situations of profound uncertainty, investors rely on and place great importance on the network ties, human capital and affiliations (as proxies for network ties) of the founding team (Higgins & Gulati, 2003; Shane & Cable 2002) in deciding which teams to back. This emphasis may be particularly marked at the earliest stage of firm development, when the team has yet achieved relatively little beyond the act of forming itself, although this has been so far examined primarily from the perspective of the

wooing venture rather than that of the evaluating VC (Hallen, 2008, Hallen & Eisenhardt 2012). It is unclear (Baum & Silverman 2004) how much the functional pipes weigh in such decisions, relative to those of the status-marking prisms. The pipes—the connections themselves—may enable the team to effect their operational aims of securing needed resources and information, and of diffusing the news of and legitimacy of the venture. The prisms—through which the reflected status of alters are perceived—serve as an indicator of underlying social capital quality, i.e., their likely ability to form new high-status connections, and of the past inclination and skill of founding team members in building valuable network connections. Some evidence that the prisms are the critical discriminator is provided by VC's expectations that once they invest, they will be able to replace members and augment the team (Sapienza & Timmons, 1989) and to bring their own network ties to the service of the venture (Elango et al 1995, Pratch 2005); thus, they might be expected to be more neutral about the current state of the team's functional ties and more concerned about the implications for status of the team's track record and reputation.

Fit with values, attributions and relationship preferences. Matusik et al (2008) find that VCs rate founders more highly when there is a match between their own pre-existing values about the relative significance for success in business of various personality traits or behaviours (e.g., extraversion, sales experience, academic orientation, past achievement, management experience) and the traits exhibited by the founder.

Fit with expertise. Sorensen (2008) demonstrates that individual VCs who evaluate new opportunities in part through a learning model achieve superior returns: new opportunities which present ways to apply learning acquired from the VC's past investments are on average more attractive and more generative. Kaplan et al (2009) show the influence of whether the VC envisages an expertise-based relationship with the firm post-investment. Though the evidence about the efficacy of advice from VCs post-investment is mixed, (MacMillan et al 1989; Barney et al 1996), Knockaert and Vanacker (2013) show that VCs who intend to support their invested venture through involving themselves in value-added activities are more likely to select ventures (and founding teams) which they judge require assistance of this kind, whereas those who intend to provide little such involvement will select ventures and teams they perceive to be competent to progress the venture without their close involvement. Kanniainen & Keuschnigg (2003) propose, in modelling the optimal portfolio size for a given VC to manage, that the terms of support to be expected from the VC form part of the negotiation over financial terms of the investment, and that venture teams expect superior investment terms from VCs who do not offer hands-on involvement with the business (irrespective of whether such advice is actually value-adding, it appears both VCs and founders expect it to be so.)

Matching and Negotiation

From the perspective of the entrepreneurial team, the choice of an initial connection into the financial domain through the identity of their first investor is a vital one. Those who are able to form a connection with a high status

investment partner see a greater likelihood of future higher status (Milanov & Shepherd 2013) and progress to an initial public offering or other exit (Sorensen 2007, Hochberg et al 2010, Pollock et al 2009). Further, those firms which are able to form such ties through their founders' ties are more likely able to achieve investment at an earlier stage of their development, rather than having to leverage proof of executing early milestones in the development of the business in order to form investment ties (Hallen, 2008). Those founding teams whose high-status first connection has a history of collaboration with its local VC network are blessed with even greater likelihood of eventual IPO success (Hochberg et al, 2007).

Conversely, those who affiliate in the first instance with a lower status VC may experience an 'illegitimacy discount' (Zuckerman, 1999, Podolny, 2005) and thus find it difficult to 'climb the ladder' to higher-status investors when later raising investment. To some extent, low reputation is also a marker of low quality, and thus firms with low-status investment partners may expect to be less able to access good advice and useful connections through this conduit. Venture founders well understand the benefits of a high status initial investor: Hsu (2004) found, during the first dot-com boom, during which a surplus of investable funds broke down some stratification and saw high-reputation VCs making more early stage investments, that such firms were able to secure 10-14% better terms than others and to have their offers of investment accepted three times as often.

The path dependencies created by status ordering are beginning to be well understood by scholars of market sociology (White, 2008, Podolny, 2005);

Podolny argues that when an alliance is struck between two parties, there is a forced transfer of status between the two, implying a cost and risk associated with any exchange relations with a lower-status alter. In situations of high uncertainty among the evaluative participants, this cost is heightened and the cleavage between low and high status market participants, Podolny argues, is therefore expected to be lasting. As discussed below, the progression of early stage ventures, usually (though not always) working with relatively lower status investors, to later stage, less uncertain ventures working with higher status investors, takes place through a mechanism of investment syndication.

Syndication

The existence of syndication processes allows high status VCs to avoid much direct involvement with nascent ventures. They thus avoid potential "status leakage"; they are, through their high status, deep pockets and the repeated-game reciprocity of the syndication process (Lerner, 1994, Abell & Nisar, 2007), able to achieve visibility of the most promising deals as they develop, without directly investing in them. Gompers et al (2009) found that specialist VC firms tended to outperform generalist ones, and that within generalist firms, specialization by individual VCs mitigated the disadvantage of the firm being generalist to some extent.

Young and early stage firms also engage in a reciprocal game with larger, more well-established firms, in which they seek to be invited to join syndicates in later stage investments. Like the 'grandstanding' phenomenon in which low-status VCs bring firms to the public markets quickly in order to build track record,

'window dressing' (Lerner, 1994) involves joining syndicated later-stage investments, closer to exit, on financial terms slightly less favourable than the higher-status members enjoy, in order to later advertise to their LPs and other counterparts that it has been involved in a successful deal and exit.

The avoidance of status leakage combined with the desire to "window dress" means that in the earliest rounds of investment in a venture, VCs with low status are likely to work with other low status VCs, and established firms with other established peers (Casamatta & Haritchabalet, 2004). But in later rounds, as the venture is more developed, the uncertainty recedes, the costs of status leakage fall, and the most typical pattern of co-investment is smaller VCs investing in deals initiated by the most experienced. Brander et al (2002) show that syndicated deals have higher returns; they advance the proposal that this derives from complementarity in skills, and their data appears to support this hypothesis, instead of a risk-sharing logic (which should show up in lower returns compared to "unshared" deals, if syndication was primarily a form of hedge.) Overall, reciprocity pays off handsomely (Abell & Nisar, 2007).

This reciprocal game preserves stratification. Inexperienced VCs will syndicate whenever they can, while experienced ones will only syndicate with other experienced ones (Cestone et al 2006.) Chahine et al (2011) show that in the final stages of a venture's development prior to and just post-exit, "messy" syndicates, i.e., those with greater VC diversity in experience levels, have less effective corporate governance in the sense that there is more earnings management, higher underpricing, and lower after-exit performance; they

suggest that this arises from the difficulty of managing power imbalances within a group of VCs and the temptation for the higher status, better connected VCs to take advantage of the lower status VCs, by, for example, underpricing shares at IPO and allowing their contacts privileged access to the share offer. Effectively more diversity of status in the group reduces the penalty for anti-social behavior by the highest-status members, to the detriment of the shareholders' collective interests. Another source of challenges for "mixed-status" syndicates is hinted at by Clarysse et al (2012), who note that early stage investors lack an international perspective, making syndication difficult, as late-stage money tends to come from the USA.

It should be noted that other rationales for syndication have been argued: most pervasively that syndication allows the correlation of multiple opinions about deal quality (Wilson, 1968); less often, but persistently, that syndicates allow diverse value-adding capabilities and diverse information flows residing in various VC firms to complement each other (Bygrave, 1988) and that syndication creates, effectively, a "deep pocketed" investor to ensure resources can be provided on a timely basis to the venture as needed, reducing failure risk (Lockett & Wright, 2001). However, scholars seem to agree that repeated-game reciprocation, and network phenomena such as homophily (Gompers et al 2012) drive the composition of syndicates, even if these other types of benefits play a role in maintaining their institutional legitimacy. Chemmanur and Tian (2010) and Bubna et al (2011) show that complementarity combines with homophily to form cliques, which leads VCs to work with the same group repeatedly, especially on complex deals. Du (2009) shows that homophily-based syndicates

are more likely to succeed in terms of exit, but that VC firms who participate in heterogeneous syndicates are more likely to survive.

It must be remembered that the entire investment process is taking place against a background of resource pressures (Hochberg et al, 2011). Founding teams might like the optionality that high status and deep-pocketed investment partners enjoy, to hold out indefinitely for the "right" partner; they require money to so hold out, and therefore rarely have the luxury. Smaller, lower-status VC firms (many of which by definition lack partners with an extensive track record of investment success) are also under time pressure to invest early in the life of their fund and to bring at least one of these investments to a relatively early liquidity event. Time presses on the lowest status players more severely than on the established firms, and this drives the matching process.

Methods

Research Design

I interviewed 37 VCs (venture capital Associates and Partners) who ranged in tenure from two to 34 years in the field, and asked them to describe their networking activities and strategy at the point they first entered the field, and their current networking activities and strategy. I entered the field with a vague research question (cf Sutton and Hargadon, 1996) concerning the dynamics of situated actor networking behavior. The intention is to establish a typology of action, attributions concerning that action, and inference about mechanisms additional to those known in the literature, to provide a perspective on behavior

and a guide for future research into this aspect of behavior (Glaser & Strauss, 1967) rather than to create predictive theory.

There were no initial hypotheses. One core assumption, derived from the venture capital literature informed the analysis: firstly, that status ordering as described by Podolny (2005) might be an important determinant of networking behaviours in this context. The nature of the research question, of course, also framed the analysis, according more with the repositioned (Bryant & Charmaz, 2002) approach to grounded theory development than with the model originally put forward by Glaser and Strauss; significantly, the analysis focused on indications that desired future states influenced the actions that respondents described (Ajzen, 1991, 2011).

Table 1 describes the 37 interviewees, who worked for 15 firms. The dataset includes 29 interviewees/12 firms investing in 'high tech' industries, typically software and telecoms, and 8 interviewees/3 firms investing in the 'biotech' industry. 12 of the interviewees were Partners and 25 less senior employees, typically "Associates". Partners and less senior VC employees have similar networking goals in terms of their search for potential ventures in which to invest and for fellow firms of VCs with whom to co-invest; Partners have the additional goal of networking with actual and potential Limited Partners (LPs) whose capital provides the financial substance of the VC firm. Except incidentally, the interviews did not address the issue of networking and building relationships with LPs.

Data Collection

I collected data between September 2012 and May 2013 through semi-structured interviews. Typically these were of between 50 and 90 minutes in length, though three outliers who gave extremely brief replies to the questions are nonetheless included in the dataset, as they add generative variance to the data. All but four interviews were successfully recorded—these four insisted on meeting in restaurants and successful recording was made impossible—in these cases, immediately following the interview I made and typed extensive notes on the answers given.

A consistent interview guide was used, asking open-ended questions about the informants' early- and recent-career networking decisions and events, and then pressing for details: sometimes for concrete examples and incidents, and just as frequently for explanations of the rationale for taking a particular described action. Interviews with Partners included an additional question: "how do you see more junior "players" in the industry making networking mistakes?"

After a fortuitous question response in the fourth interview, subsequent informants were asked "do you have a metaphor you use to think about your network, and if so, what is it?" Biographical and career data was also gathered, in some cases by email after the interview took place.

Data Analysis

First, each interview was translated into an 'explanatory events matrix' (Miles & Huberman, 1994) as a way of deriving the data into a form while making clear its temporally embedded nature. Underlying the translation was a concern with

how respondents' view of the future influenced their decisions about what networking actions to take. For example, rather than simply recording that the respondent visited a conference in order to make new contacts, the context or rationale proffered for this action was also recorded. These contexts and rationales provided in vivo (Strauss & Corbin, 1990) codes. The creation of these codes made clear that a divide existed in the data regarding the time horizons being considered by the respondents when they made their decisions. As previously noted, this gave rise to an additional research question.

As a second step, individual actions, together with their associated context/rationales, were separately recorded and subjected to analysis. 210 individual actions were recorded and coded, using five categories of axial codes which I judged emerged from the data, considering the five research questions (allocation of time, with whom to connect, tactics for connection, content and affect of connection, influence of time horizon):

1. type of action (for example, meeting socially (a setting such as a dinner party where business would not be the principal subject discussed); meeting quasi-socially (a informal setting such as a coffee or a drink where business would be discussed); meeting in a trade association or other industry network setting; meeting in a conference setting; initiating a phone conversation; hearing a pitch; reviewing a business plan or idea; eliciting/receiving second-hand information about an alter; having a multi-participant meeting).

2. type of alter (for example: venture founder; same-firm VC colleague; other-firm VC colleague; seed (non-VC) investor; accountant; lawyer; corporate finance adviser; sector expert; academic; other adviser.)

3. immediate intention of contact (for example: initiate contact; maintain contact through business discussion; maintain contact through social discussion; provide counsel; learn; negotiate; introduce alter to a third party.)

4. (espoused) strategic/medium-term intention of contact (for example: assessing opportunity; strengthening relationship; building firm 'presence' in a domain; building personal reputation/prominence; creating a basis for reciprocity; communicating the VC's own firm's position/attractiveness.)

5. additional codes indicate employing VC firm status (and the potentially anomalous status of the six 'movers'), years of tenure in the VC field, partner/associate, tech/biotech, early-career action/recent-career action.

I also considered the status of the firms which employed the VCs, and in cases where a recent career change had been made by the VC, whether the movement was to a lower status firm (as when a partner in an established high-status firm leaves to set up a new firm) or to a higher-status one.

Since one aspect of this study is how status ordering, as perceived by the respondents themselves, influenced their decisions and actions, my objective in establishing firm status was to establish not an objective raking based on financial size or activity measures, or network centrality measures, but to

establish a ranking which would reflect the perceptions of the interviewees themselves about their "place" in their industry. My preference would have been to use a league table of firm status, known to all the participants and from which they could be argued to draw their perception of their own firm (Bromley, 2002); however, no such league table as yet exists for London-based VCs. Thus, to establish firm status, I reviewed a range of industry publications such as unquote.com, venturechoice.com, cbinsights.com, entrepreneurhandbook.co.uk, bvca.co.uk, askivy.net, pseps.com, pitchbook.com and venturebeat.com. I compiled an initial status ranking of the 15 firms based on my subjective impressions in reading these industry publications. I then returned to two of my prior interviewees and two individual VCs who had not been part of the previous research, and asked them, in face to face meetings, to place the 15 firms, along with an additional 15 'dummy' firms I selected to maintain the anonymity of my interviewees, into three tiers. There was very substantial unprompted agreement about the placement of the 15 firms of interest into high-, middle- and low-status firms, with total agreement between the four respondents (and my own subjective impressions) about 11 of the firms. I followed up by email to ask the four respondents if they felt that the four firms over which there was disagreement were "edge cases", or would they stand by their original rankings. There remained substantial disagreement about two of the firms. I then, by email, asked 10 of my original respondents and 10 "new" respondents to classify these two firms and two dummy firms I selected. I received eight replies from these twenty. There remained some disagreement. In coding, analysing and considering the data I reflected on whether the apparent lack of clarity over the status of these two firms was significant to my conclusions and propositions.

Ultimately, I placed the firms in three tiers: five of the firms and nine of the respondents worked at firms were categorised by my respondents as high status (Tier 1); six of the firms and 20 of the respondents at firms were categorised as middle status (Tier 2); four of the firms and eight of the respondents were categorised as low status (Tier 3). Of this last group, two respondents were partners who had set up their firms in the last three years, having previously worked for a Tier 2 firm. In analysing the data I considered whether the old or new status of these two 'movers' might be more influential in a given setting.

Once the 210 events were recorded in the matrices, and the actions coded, I considered how the actions fell into groups and clusters, and how they related to the four original principal research questions (and the additional emergent question) concerning hunting/harvesting, alter choice, choice of approach tactics for new alters, choice of communications tactics for ongoing alters and additionally, the time horizon over which the actor was considering the consequences of his networking actions.

AGENT NETWORKING BEHAVIOUR

What emerged from the data were insights into actions taken by VCs used for networking, into their choice of networking strategies, and into their cognitions about their networking actions. The findings are reported here, in five sections:

1. *Dealing with FOMO: splitting bandwidth when there are 'too many' networking opportunities*
2. *Hunting or Harvesting: moving on to new domains*
3. *Presentation to the prospective alter: conduct vs connections*
4. *Thresholds: sequencing status moves*
5. *How long will we be living together: cycle time and opportunism*

Each section is accompanied by propositions that are intended to be testable outgrowths of this research, for further investigation and testing for generalisability.

FOMO (Fear of missing out)

"We know about the deals. If there's anything interesting going on in the space we cover, we will either already know the players or it will get brought to us by one of our colleagues or associates for review." *Partner, 1st tier firm*

"The big fear for any one of us is missing out on too many of the largest exits in a row." *Partner, 2nd tier firm*

"The truth is, if it's a really promising deal, we could meet the founding team, but they will quickly realize they are able to access bigger fish than us. There are ways we can try to deal with that but it's a fact of doing business." *associate, 3rd tier firm*

Among Tier 2 respondents, a pervasive theme of networking discussions was "fear of missing out" (popularly referred to as FOMO.) Respondents from the lowest- and highest-status firms did not express concerns about this. Those employed at the highest status firms said they rarely invest in the earliest stage, with the exception of founding teams who have previously made a successful exit, and many of their members expressed confidence that they would get sight of all relevant, high-quality opportunities. The lowest status firms are often not able to invest in later stage opportunities, due to a limited fund size, and have limited opportunities to create reciprocity unless they are bringing a solid relationship with a firm, one in which they have already invested, to the table. Their fear is of missing out through never making a mark, not of missing out through inadequate vision across their network.

"I have got to appear not as an investor but as an advisor. If I get to an entrepreneur early, then I can build up the trust over a period of months and years so that when they start talking to other investors I am already someone on their side." *associate, 3rd tier firm*

"I do a lot of work with alumni networks and trade bodies in China so that I can talk to a range of people without it being directly about how their company and its growth is going. I need the visibility just to get to sit down with people." *associate, 3rd tier firm*

Networkers in the middle tier appear to have more potential, and therefore "more (networking) problems": in any given technology space, they might be able to take a leading role in nurturing and leading a syndicate for a particular venture—but they might also have opportunities to play a subsidiary role investing through a syndicate led by another firm. Although the terms of investment might be notionally better (Wright & Lockett, 2003) for the lead firm in a syndicate, this is merely an 'edge'—the truly significant payoff comes from backing the right venture, not from being in charge of a syndicate. In such a

'game', the optimal strategy for both the highest status and the middle status players may be to develop ties to keep track of, and have relationships with, all (or as many as possible) of the potential counterparts, while delaying committing to any of them in order to await further information which may shed further light on the value of backing, or syndicating to back, a given firm. (This is the obverse of the ingratiation and 'triggering' strategy venture teams use to create a scarcity dynamic and get an auction started, as identified in Hallen and Eisenhardt, 2012). For the highest status networkers, their prominence helps ensure that their network's 'reach' and the existence of past reciprocal ties with other top tier firms and VCs makes this a low risk strategy:

> "We take a hotel room at the … conference and just fill up the diary with deals people we trust are recommending to us to listen to and just hear pitches and have conversations with teams." Partner, 1st tier firm

But for firms in the middle tier, the network is not 'doing the scanning for them'. This is potentially more FOMO anxiety-inducing, (or, to put it another way, their network does not offer a dominant strategy for exploiting their existing ties) and thus more proactive strategies emerge:

> "I do spend quite a bit of my time with entrepreneurs and teams. But so much of what you have to do is spend time at conferences where you can keep on the pulse of how deals are developing across the tech space I am working on at that moment. I want to know what experts think is happening and hear about the latest numbers as much as I want to keep in touch with specific people." *(Associate, 2nd tier firm)*
>
> "We got a group of associates together, all a similar age and stage of career, from different firms, and we have drinks like once a quarter and just get to know each other. Once a few of us went skiing….you probably don't talk about deals directly too often when it's supposed to be social, only a few people want to come on too strong, but you just listen to what people are working on and then for the future you know who is interested in what kind of deals…later you can phone them knowing they are already interested in what you have to say." *(Associate, 2nd tier firm)*

Divergence in dealing with FOMO.

All of the interview respondents who mentioned FOMO were from the 2nd tier of firms. Not all mentioned FOMO, but among those in this second tier, almost all discussed strategies for splitting their network "bandwidth" between scanning for industry knowledge (triangulated by talking to people from many domains—customers for the new tech; lawyers, accountants and advisers with view of developments across a variety of development stages; academics and technology transfer offices) and seeking potential syndication partnerships instead of focusing primarily on building relationships with entrepreneurs/founders. These approaches diverged in significant ways, which often depended on the view the VC took of their skills and the likely outcome of applying them. In effect, VCs made a plan which was founded in the attributions they had formed about how to manage their 'not enough time, not enough visibility' challenge.

Approach 1: build a strong relationship with a chosen firm, courting them.

One cohort of VCs from middle tier firms clearly indicated their belief that the core of their role was to get to know founding teams and to build multiplex ties—ties with an advisory and social/personal aspect to the fore, not directly potential investment-focused—with them. As a corollary to this approach, three partners mentioned that it was important to be "in pursuit" of more than one and potentially several teams.

*'If I have a personal [social] connection with someone, then it doesn't necessarily mean anything but the odds are tilted just that tiny bit in my favour, so I might concentrate on them' (Tier 2 associate)

*'When I was recruited into this industry {decades ago}, it was on the basis of having empathy with entrepreneurs and knowing how to build trust and that is what I still do' (Tier 2 partner)

Approach 2: build a strong scanning operation by focusing on peers/ complementary contacts rather than specific deals. Seek suitable opportunities to promise (or hint at) reciprocity (or draw down on the store of it) to try to enter into syndicates in a given space rather than using direct founding team cultivation.

*'Industry colleagues are the future and you will be working with them for a long time, founders come and go' (Tier 2 associate)

*'"Flirt with everybody so you are known as available and open"' (Tier 2 associate)

*"I make sure everyone I meet and keep in touch with knows the kind of thing I am interested in working on. That way I don't have to ask if there is anything going on, or worse yet invite myself into a particular conversation, I can wait to be invited by people who know I am keen to be in on certain subjects." (Tier 2 associate)

Proposition 1. In an ordered status, socialized matching network, middle status networking agents will exhibit more variance in their choices of networking actions than high- or low-status networking agents.

Building a presence in a new sector—hunt or harvest?

Sorenson & Stuart (2008) discuss how the emergence of 'faddish' new technology developments leads to a good deal of tie rewiring in the VC network, as existing clusters of VCs do not move en masse to the new sector but less evenly. Why do brokers move on to new sectors ("hunt") rather than "harvest" existing status? This is a significant puzzle in the brokerage literature. There is much evidence to show that brokers move, as vividly, if speculatively, described in Chapter 5 of Burt's *Brokerage and Closure* (2000), from one structural hole in a network to the next, like Hayekian entrepreneurs seeking out new, inadequately brokered, opportunities based on fleeting local knowledge. Yet, we know that brokers do not always behave like this. Sometimes, they 'stick

around' and don't move on. Obstfeld (2005) suggests 'filling in' a structural hole rather than moving on away from it as it fills in is an orientation; Lingo and O'Mahony (2010) provide a task contingency basis on which brokers may create closure rather than moving on.

I found that some individuals from both Tier 1 and Tier 2 firms don't try to move on. A number said that the notion of working across more than one sector was theoretically attractive, but, in the words of one "too tiring to consider."

'It is a well-known saying in the industry that every VC is washed up after 10 years. You come into the sector with a contact book and you work it for a certain amount of time and then the world has moved on and you and most of your contacts are yesterday's men. There are some exceptions, like Fred Wilson, who manage to move from sector to sector successfully, but it is really the exception.' (Partner, Tier 1 firm)

To the extent that VC's do move into new sectors, they often rely on being "pulled" by colleagues, partners and advisers, rather than pushing to form new ties in order to build a reputation in the new sector, or to form specific connections. It was notable among the biotech investors in the sample that they described any movement into new sectors as being based on new science, and thus on VCs following entrepreneurs following scientists (with some overlap in identity between the latter two categories.)

Some players, who were more open to moving into new sectors, described themselves as having substantial "stored up" obligations and expectations of reciprocity with those who were moving first, and more aggressively. A policy of

specialising in one sector but maintaining active ties to those 'on the move' was described by one senior VC as 'insurance'.

Other common strategies for moving into new sectors were to grow the scope of a VC firm, by bringing new partners on with the specific purpose of "covering" an emerging or important sector, to launch a new venture capital fund with a different configuration of partners and specialisms to the old fund, or to task associates with the role of building connections in the new domain. Indeed VC associates indicated almost without exception that any decision about changing sector specialism was outside their control and several described being assigned as an advance scouting party into a particular sector of interest.

Some low-status (tier 3) VCs, particularly associates, indicated that they were not yet specialists. With limited pre-existing ties and a relatively open brief from limited partners, such VCs indicated that they would happily move their focus to get in on the ground floor of a new technology, in an emerging field where other firms have not already formed too many controlling relationships. It was this finding that led to the establishment of the fifth research question concerning the variance in networking strategies developing from differing time horizons.

Proposition 2a. In an ordered status, socialized matching network, some network brokers will remain in the domain which formerly was the "site" of a structural hole which they bridged, seeking advantages from developing network closure rather than seeking out new brokerage opportunities.

Proposition 2b. In an ordered status, socialized matching network, when brokers seek to move to a new domain, some will do so by following other, lower-status alters who have moved more aggressively into that domain, thus benefiting from the embedded nature of these ties and the potential for exchange they represent.

However, a few informants from top tier firms, even senior ones, did report instances in their career when they moved into new domains with what one might characterise as a 'lead the way' strategy rather than a 'let others light the way' strategy—reaching out to form new ties in the new domain directly rather than through intermediaries. This was described as "staking a claim", "displaying thought leadership", and "looking to the next growth horizon" by informants, who seemed to focus, in their retelling of these types of incidents, on just how far 'ahead of the curve' they were in making such moves.

Perhaps, just as when middle-status players do not see a dominant networking strategy, dictated by their network, very early stage markets or technology domains can be characterised as having higher levels of indeterminacy—the moves and possibilities are difficult to foresee. Within their "home", established domains, high-status players appeared to rely almost completely on adviser or peer referrals, yet in these few "new-domain incidents", they did not.

Forming relationships directly with low status firms, we believe following Podolny, should impose costs through status leakage, and as this approach is not the dominant style of networking approach to which they are accustomed, perhaps there may even be a deficit in terms of the relationship-building skills required. Burt suggests that each new brokerage success confers (and requires) status, so perhaps this prospect is the incentive that draws even high status VCs to such approaches. Yet the emphasis placed by informants on the nascent stage at which they found it most interesting to make such moves suggests that potentially, the status leakage Podolny posits is lessened when uncertainty is

near-total: true pioneers may be able to avoid status leakage, where mere 'fast followers' are seen as jumping on the bandwagon.

Proposition 2c. In an ordered status, socialized matching network, when brokers seek to move to a new domain, some will do so by seeking out truly nascent domains, where they may be able to avoid status penalties by achieving and claiming pioneer status; such status derived in part from direct formation of ties rather than use of intermediaries.

Presentation to the prospective alter: conduct vs connections

One set of probe questions that was asked of almost all informants was how, and through what tactics, the VC presented himself/his firm to potential investee firms. Also, I asked many respondents what role namedropping, and making introductions to potentially helpful others (Pratch, 2005), played in the way they formed relationships with founding teams.

As previously discussed, some VCs push to form many direct ties with venture teams. Sometimes the effort was based on attempting to make the tie multiplex, trying to add a social/personal dimension, or basing the approach in the first place on using pre-existing similarity such as school ties or former shared workplaces (Cohen et al, 2010). Such direct approaches were universal among Tier 3 firms:

'I am the hardest working VC out there. I need to show founders that I will be on their team and on their side and having me there will be great for them. In the end I want to make it a very personal decision about bringing me into the team until they get to the next round of fundraising.' (Partner, tier 3 firm)

'I do a lot to try to get my name out there as someone who is really on a mission to support the 3D printing sector. I will go to any event, speak on any panel, as a champion for the sector. It gets my name out there, and I can talk to founders as someone who is on a mission, not just focused on whether we'll invest in them.' (associate, tier 3 firm)

'I am very visible in my alumni network and I use that as my main starting point for new contacts. My firm's name doesn't open many doors yet so it's a way to show I am a good citizen.' (associate, tier 3 firm)

Most informants saw introductions as an important tool:

'I don't tend to lead on the introductions side. I do have some good connections but I need to use them carefully and make sure I am adding value for them when I do an introduction, not only for the founder.' (Partner, tier 3 firm)

'Making introductions is really important to working with particular entrepreneurs. We want to show that there is a clear fit between what we can do and who we are bringing to the table and what they need. It's one of our main ways to counter what the bigger firms have to offer.' (Associate, tier 2 firm)

Informants fairly often suggested that their efforts were based on what scholars know as triadic closure and balance theory: that introducing founders to many of their acquaintances and potentially helpful people was more than simply an effort to give some value to the alter, and to show or imply the value and status of their connections generally and thus their potential future value should the relationship deepen, but was also "to try to introduce them into 'our gang'".

"If they start working with one of my lawyer friends, that is really a good sign" (Partner, Tier 2 firm)

'Who you know is every VC's stock in trade. Basically I want to make as many introductions as possible because I want to show what they will be getting when they work with us. There is one chap who I use a lot, he's a retired CEO of [FTSE100 firm] and it's not only about namedropping, he is really a great mentor to these young entrepreneurs and helps them a great deal in a personal growth sense.' (Partner, Tier 2 firm)

'Making introductions is really important to working with particular entrepreneurs. We want to show that there is a clear fit between what we can do and who we are bringing to the table and what they need. It's one of our main ways to counter what the bigger firms have to offer.' (associate, Tier 2 firm)

As also previously discussed, some make connections with founders almost exclusively through intermediaries.

"We don't have to nudge very hard, if we announce we are looking at ideas in a new area we get a flood, so we only put the word into a few ears to keep it manageable." (associate, Tier 1 firm)

Courting ventures directly was described by higher status VCs as a low-status thing to do.

'I never invite anyone to connect to me on LinkedIn, I wait to be invited. Then I know if someone is in my LinkedIn list, they have come to me.' (Partner, Tier 2 firm)

'I hate socializing so what I do is work to establish myself as *the* expert in my key areas. Then I can talk to people that way, gathering or giving information.' (Partner, Tier 2)

'The approach I take is to play host. I bring groups together and introduce them to each other. Everybody likes the person sitting next to the drink, and we don't have to sell. We keep it semi-exclusive so people want to be there.' (Partner, Tier 3)

High status VCs mentioned that their status derived from the pulling power of their ties VC "at the other end" with potential trade buyers. Trade sales make up an increasing proportion of entrepreneurial firm exits, and the opportunity to show their access to specific teams at the potential purchasers, and successful track record of negotiating transactions with these named people, was a useful method of demonstrating status. "War stories" which depicted the VC as a trusted advisor to the potential firm purchaser, rather than a supplicant, were held out as potent displays of the precise aim of the intended relationship between the VC and the entrepreneur.

However, several of the high-status VCs interviewed indicated that they never name-dropped, even in this particular way, and that they did not engage in making introductions between founder and others prior to investing in the firm.

'I don't normally make introductions. I think it's kind of insulting to the founder that you think you know what they need well enough after one meeting. If I'm sitting on their board it's a different story, but not as part of the getting to know you process, you can do more harm than good sometimes." (Partner, tier 2 firm)

'Before a team talks to us they will know where we stand. We don't have to tell them. I don't drop names or promise introductions before we invest. That is covered when we present our credentials, that we can and will provide them with valuable contacts. Compared to some others we are pretty hands off even then though, we would be looking for founders who can figure out how to make the contacts they need.' (associate, Tier 2 firm)

'I only drop names of their fellow founders who work with us and are further down the road.' (associate, Tier 1 firm)

And one higher status VC suggested that the "normal" approach (with which he contrasted his own method) of the top firms was to resolutely refuse to "open the book" either about the methods they would use or the identity of their contacts. Calling such firms "the Death Star", he proposed that the general ("typically British") approach was to simply exude confidence and the markers of being "on the inside", and that the message intended by such behaviour is that joining their circle is the real barrier to success (rather than the other hurdle of commercial success for the entrepreneurial venture once it has secured investment.) His own approach, by contrast:

'we present ourselves in the most transparent way possible. We make it clear how we do business. It's a standard selling point for us that sometimes if you get in bed with the devil it looks great until you have signed your soul away. We always say to people that doing business with us after you take our money will be exactly the same as now, we don't want to sell to people, although of course we are doing that, but we don't want to in the sense that we ever over-promise or imply a sort of fairy tale about the way we will work together. It just saves a lot of time if you make it easier for them to evaluate you.' (Partner, Tier 2 firm)

Figure A shows the patterns derived from the data of the three logics I propose underlie tactical networking decisions in forming ties with potential investee alters.

Status Tier	New-tie actions foregrounding conduct	New-tie actions foregrounding connections
High (9 informants)	13	34
Middle (20 informants)	40	41
Low (8 informants)	30	1

VCs in the lowest tier of status focus on displaying good *conduct* and, lacking an extensive or high-status network on which to build trust through reputation, try to build trust dyadically (Burt & Knez, 1995), for example through making ties multiplex and thereby seeking relational embeddedness. They have a much greater tendency to see all ties as potentially generative and often show a belief in serendipity.

Those in the middle tier have two complementary approaches. Their networks are not so extensive or all-pervading that they can simply rely on reputational power to draw alters into their orbit. Thus, their *connections* are currency. They seek to compete with higher-status VCs by demonstrating that their particular set and configuration of connections are a good fit with their would-be investee's requirements—a close enough fit to obviate larger firms' advantages in terms of breadth of connections and status markers. But they also seek to show good

conduct: again in competition with the highest-status firms, they wish to show how the investee firm, in working with a middle-status firm, will not suffer from the dark side of reputational power—the power to extract rents from the firm in exchange for that reputation. The choice to emphasise conduct or connections to alters and potential counterparts appears to spring from a logic of *differentiation.*

The highest status firms rely on a *connections*-based approach, allowing their reputation to do the work for them. They appear to maintain the density of their cluster of advisers and informants in part by not introducing them to alters "unnecessarily" and thus diffusing the flow of information, and perhaps the norms (cf Baum et al, 2003 on "control partnering") in the network.

Proposition 3a. In an ordered status, socialized matching network, when agents seek to make new connections, some will do so by emphasising their intention to behave positively towards the alter.

Proposition 3b. In an ordered status, socialized matching network, when agents seek to make new connections, some will do so by emphasising the potential value of their connections to the alter.

Proposition 3c. In an ordered status, socialized matching network, when agents seek to make new connections, they will select their emphasis in part based on differentiating their "offer" to the alter from the "offers" of those they perceive as competitors.

'I think what I try to do is be memorable. It sounds funny but that's why I wear my hair like this. You have to not rely so much on the credibility of your employer but try to stand out as a professional yourself. Otherwise you are interchangeable.' (associate, tier 2 firm)

"The mistake juniors make is that they simply try to copy the networks of their seniors. But this isn't bringing anything fresh into the mix, they have to make their own mark." (Partner, tier 2 firm)

Thresholds: sequencing status moves

'The contacts I brought into the job, I thought would be really valuable. But in the end I just realized I was trying to force connections between people and I more or less had to start from scratch.' (associate, tier 2 firm)

As mentioned previously, many VCs did not consider that they had a networking strategy. But those who did often raised the idea that they were climbing a ladder of status.

'you have to ask with each person you come into contact with, could this person help me in the future? Are they on the way up? What do they have that others don't.' (Tier 2 associate)

'anyone who is better-regarded than you is worth associating yourself with' (Tier 2 associate)

One pattern that repeatedly emerged in accounts of "social climbing" was that there were certain types of actions that were only worth taking once a certain threshold had been reached. When one had no track record, it was not worth reaching out to try to form alliances with the highest status people.

'First I had to network outside and just hustle. I made some useful contacts that way but really I was just feeding them to the colleagues within the structure who could make more use of them. But eventually for the first time I was put on the board of one of our investee companies. And that meant I could be a bit bolder in asking for contacts from the 'internal Rolodex'. If I had asked colleagues for contacts before it just would have been too big of a favour. But then I had more of a reason to ask so I could start trading internally more. Once you are in a colleague's debt in a way that just creates a basis for you to talk to each other and for you to keep trying to repay them.' (associate, tier 2 firm)

"In the medium term, I'd love to move from venture capital to private equity. So I have some old university friends who are now in private equity who I try to spend time with, and it certainly influences my thinking in terms of the deals I think are worth doing—are they going to look interesting to anyone if I try more actively to make that move?" (Associate, tier 2 firm)

'One way to look at it is that I am the employee of our main investor, out there scouting for deals on a quite healthy taste of the upside. If we want to go anywhere, then I need to get one or two deals done and keep him happy while at the same time looking for two or three other partners to come into the fund.

Then we'll be a proper VC firm instead of just looking for scraps.' (Partner, tier 3 firm)

In considering the dynamics of a socialized matching network, the effort to trade up in status through the lateral (in status) assembly of contacts, expertise and their signifiers, which, once assembled, will allow one to move into a "higher league", appears to be an important driver for a significant number of networking decisions.

Proposition 4. In an ordered status, socialized matching network, when agents manage their connections, they will sequence their actions, seeking threshold levels of reflected status in order to facilitate later, reputation-based approaches, to new higher-status alters.

How long will we be living together: cycle time and opportunism

"One difference between our industry and investment banking is that we are working on projects that may take seven or more years to complete. We have to live with the teams we invest in over a long period of time, and so that makes everyone nicer." (Partner, tier 1 firm)

"A mark of a good VC that everybody talks about is how they treat the teams where the investment has failed. I am never sure how much that is really true, but we certainly spend a lot of time talking about it." (associate, tier 2 firm)

During the analysis of the data, a clear divide became evident between those who primarily sought out early stage founding teams/firms and those who primarily sought out syndication opportunities and later stage opportunities. Those in the former category typically described themselves as having no other choice. As discussed in the literature review, low-status firms are typically unable to enter deals with large firms (and, if they do so, are liable to be taken advantage of in terms of the governance of subsequent rounds of the firm's development through the power/status imbalance) and this was confirmed by the observations in the present study. The path ahead for a small, low-status firm was to cultivate early stage ventures and, if it wished to become higher

status to attempt to ride the back of the success of one or more of those investments to form higher status partnerships.

A clear dividing line in terms of the role an investor plays, their relationship with the founding team and their imperatives for managing their network, arises between the situation where a small or low-status investor is in the "lead position" as the largest or most influential investor, and a situation where they give up that seat to a larger player. Low status VCs know that in all likelihood they will be 'in the lead seat' for only a short time (typically, say, between the first and second large rounds of investment); that if the venture succeeds a further round of investment will follow, where even if they manage to remain in the lead role, their status within the board, relative to deeper-pocketed investors will fall.

Simultaneously, early-stage investors' opportunities may be biggest when a sector is in its relatively early stage of growth. And, it is in such a stage that both the absolute and relative rate of firm failures (both pre- and post-outside investment) will be higher. As a newly opened territory matures, the chance to bypass the disadvantages of a weak position in the overall status ordering and make a connection which may help pull them up the ladder may be lower.

By contrast, higher-status firms invest in sectors that are relatively, and slightly, more mature. They may work to develop their networks in truly nascent domains for the sake of knowledge and future relationships, but they do so still planning to invest only once firms are ready (e.g., have proven products) to

benefit from larger investments. And, these investing firms may expect to remain in relationships with their investee counterparts for several years before exit.

Thus, low-status firms seek higher-uncertainty investments and expect to remain in the lead position in those investments for a relatively short time; higher-status firms make (slightly) less uncertain investments and expect to remain in the lead position for a much longer time.

For low-status firms, the shorter expected co-tenure of relationships may make some of their networking choices (how much to "invest" in actions that build reputation, as opposed to actions designed to secure business in a short-term time horizon, how to treat investee firms post-investment) more opportunistic and short term. Simultaneously, with a higher absolute and relative chance of investee firm failures within this earliest part of the sector, the frequency of opportunities for sector players to observe how investors treat entrepreneurs in cases of failure increases. Investors whose investments are failing must act either to minimise their losses and risk appearing heartless, or extend discretionary effort and resources which they can only be uncertain about the immediate utility or indeed the chances it will be widely known about to reflect on their conduct with credit when a future potential investee is considering a partnership. (This is not to suggest that these alternatives and consequences are the only considerations in such a decision.) Low status firms may more often follow patterns of networking decisions including plans to move on from sectors

where an investor has failed and "made enemies" may more often be seen as necessary/desirable.

Higher-status firms' opportunities and networking choices are based on longer term time horizons.

This discrepancy may help preserve the structural hole predicted by Podolny (2005) between low and high status players. An investor's particular networking style/strategy is based on some implicit expectations about how soon he expect to get payoffs from his relationships, and these expectations may create path-dependence.

Proposition 5a. In an ordered status, socialized matching network, agents will manage their relationships with an expectation about how long their relationships with alters are likely to last.

Proposition 5b. In an ordered status, socialized matching network, expectations of the length of relationships with alters will influence the balance of utilitarian and reputation-building actions agents make.

Proposition 5c. In an ordered status, socialized matching network, agents will manage their relationships with an expectation about how likely their relationships are to end in failure.

Proposition 5d. In an ordered status, socialized matching network, expectations of the likelihood of failure of their relationships will influence the balance of utilitarian and reputation-building actions agents make.

DISCUSSION AND CONCLUSION

Understanding the short run of networking decisions requires researchers to attempt to differentiate between those who act expertly and strategically, and those who act according to the expectations and constraints of those around them and what appears to be their dominant strategy in a given situation. This

study has attempted to begin to open up this box, by investigating and codifying mechanisms driving behaviour.

There are several contributions:

--I propose that middle-status actors are the most strategic in the use and shaping of their networks. Their network does not provide them with a dominant strategy, so their range of choices is more ambiguous.

--I propose three logics actors use in deciding how to present themselves to alters. Some (especially high status actors) lead by presenting their connections; some (especially low status actors) lead by presenting their past and intended future conduct. Many actors (especially middle status actors) use a logic of differentiation, to consider how to present themselves in a way which allows them to stand out from perceived status peers or superiors.

--"Projective agency", the collection of attributions actors have about their future, drives networking behaviour in two ways:

--ambitious actors seek to assemble a collection of connections which will enable them to attract the interest and engagement of higher-status connections;

--actors consider how long they are likely to be in a particular type of relationship with alters, and how long they will be "in the neighbourhood" of a set of alters, in determining appropriate action in respect of those alters.

Two trajectories of further research are hoped to spring from this beginning:

- quantitative testing (and associated methodology development) of the propositions put forward in this paper

- further qualitative research to triangulate, enrich and explore the generalizability of the findings here, with an aim to create a typology of networking strategies and their interaction with structural factors.

CHAPTER 6: **Summary of studies; final conclusions and thoughts**

The studies in this thesis seek to 'lift the lid' on some black boxes, and pursue insights about processes and mechanisms driving innovation success and networking behaviour by innovators. That networks "bend preferences" (Burt, 2000) is well understood—how actors and teams of actors act despite, or because of, those preferences is less well understood.

I set out to attempt answers to a range of related questions:

Chapter 2:

How can firms use boundary-spanning, co-ordinating teams to support successful innovations? Can a team create or exploit bridging ties more effectively than an individual and if so, how? Can a team diffuse the 'blocking power' of gatekeepers and if so, how?

The research in this thesis suggests that co-ordinating, boundary-spanning teams are indeed able to support successful innovations, not only by bringing sets of bridging ties together, but by creating **new** avenues through which they can source needed information and political support. Appropriate leadership, and the use of informal ties when appropriate, allow the political and other 'blocks' experienced by teams to be effectively responded to. Teams can be a structure through which organisations and their managers can circumvent "gatekeepers", both by the creation of new ties (when teams reach out to gather support for their initiatives) and by the creation of a venue for competitive, rivalrous attempts to be seen as the "go to person" in a given team, with actors seeking the gain of future opportunities to connect the team and its members rather than seeing their gains as coming from guarding or blocking connections. Teams need time to build new ties, and their willingness and ability to do so may

be related to the extent to which they are assigned "full time" to their innovation projects.

Chapter 4:

Which types of social networks and leadership styles contribute to Business Model Innovation performance? How does this differ across the concept and development stage of BMI? How do BMI team characteristics in the concept stage influence those same variables – and ultimately BMI performance – in the development stage?

As proposed by the new TIMOTI model, the required characteristics for successful BMI teams change across the stages of the BMI's development and there are fruitful and barren routes for this development to take. Success depends on the adaptation of the leadership style and the team composition (corresponding to the composition of the team's networks to parties inside and outside the organisation.)

Chapter 5:

How do venture capital partners and associates employed by firms of variable status, allocate time between different ties and different categories of ties, selecting whether to "hunt" for new ties or to "nurture" or "harvest" the existing ones? How do they decide upon particular alters as potentially fruitful connections? How do they approach new prospective alters: what tactics are selected for forming relationships? What efforts are made to influence or determine the basis (e.g., social, quasi-social, transactional, multiplex) of the relationship? How do they select the desired content and affect of their communications with their ongoing

alters? How do they take the time horizon of their activities (e.g., the cycle speed of the types of transactions they conduct) as a guide to appropriate action?

The tactics and strategies of networking actors were found, as expected, to be driven by their status. But many actors sought to lift their status through sequenced sets of actions, and to follow logics of differentiation to succeed in their pursuit of the "right" complementary alters. They timed their "moves" according to their status implications, and gauged their balance of reputation-building and reputation-harvesting activities according to their future-directed plans and aspirations.

Where next?

The domain of "networking strategy" or "strategy in networks" at the individual and team level needs filling out beyond these early steps. I hope to work with collaborators to undertake longitudinal studies capable of putting these proposed mechanisms to empirical tests and unearthing discoveries about the size of their effects. Can we understand more about the effectiveness of these strategies? Can we even begin to make some predictions about how and when these individually-based phenomena intersect with the fascinating work on network emergence recently given voice in Padgett and Powell's collection?

In parallel, I hope to translate some of this observationally-founded study of behaviour in networks over to some exploration of its cognitive foundations. For example, is there an emotional or personality-based foundation to the choice of logic used for connecting to alters?

I hope to be able to pursue the trajectories this research opens up further and I thank the reader for his or her pains in engaging with the work.

Chris Coleridge, London, July 2014

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