Research Grants

PROPOSAL

Future Research Leaders - Full Proposals

<table>
<thead>
<tr>
<th>Organisation where the Grant would be held</th>
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<tbody>
<tr>
<td><strong>Organisation</strong></td>
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<td><strong>Division or Department</strong></td>
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**Project Title** (up to 150 chars)
The language and body language of entrepreneurs: How verbal and non-verbal metaphors are used to persuade investors to fund new ventures.

**Start Date and Duration**
a. Proposed start date: 01 October 2012
b. Duration of the grant (months): 36

**Applicants**

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Organisation</th>
<th>Division or Department</th>
<th>How many hours a week will the investigator work on the project?</th>
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<tbody>
<tr>
<td>Principal Investigator</td>
<td>[Redacted]</td>
<td>University of Leeds</td>
<td>Leeds University Business School (LUBS)</td>
<td>15</td>
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**Classification**

International in nature? **No**

Please give details
Objectives

List the main objectives of the proposed research [up to 4000 chars]

This project examines how entrepreneurs can be most effective in communicating with key stakeholders in order to secure much needed support for novel ventures. The project will contribute to academic knowledge and non-academic policies in four principle ways.

First, this project will empirically examine and mainstream the PI's new theoretical perspective, recently published in a top American journal and extend this theory to account for how entrepreneurs use language and body language to communicate effectively with stakeholders and secure investment. This approach offers a means of overcoming problems with cognitive and institutional perspectives in the entrepreneurship literature. Rather than focusing on inner states that drive owner-managers' behaviour (cognitive perspective) or symbols associated with the legitimacy of ventures (institutional perspective), the PI's approach directs attention to how entrepreneurs give sense and justify their ventures to stakeholders through verbal and non-verbal metaphors.

Second, this research will highlight the role that metaphorical hand gestures play in communication in entrepreneurial contexts. Gestures are an important but neglected part of communication and at the present time are almost entirely absent in research in the field of management and business. This research will also provide detailed information on entrepreneurs' use of linguistic metaphors in communicating with stakeholders and the impact metaphors have on investor decision-making. Although prior research has suggested that metaphors are central to how entrepreneurs create sense for others, there is still very little evidence on when and how metaphor can improve entrepreneurial communication.

Third, this project will introduce and mainstream methods from visual anthropology (visual ethnography) and linguistics (analytical protocols for the analysis of speech and gesture) into management research. Although applied in other disciplines these approaches are highly innovative in the context of a business and management project and will build capacity and mainstream these methods within the business and management community.

Fourth, the findings of this project will provide guidance to policy-makers and entrepreneurship educators on how entrepreneurs can be most effective in pitches or during interactions with stakeholders. Among other impact activities, state-of-the-art training materials will be developed and used within Leeds Enterprise Centre, Connect Networks and Start-Up Britain. Users have been involved in the design of this study and will help with dissemination to other user groups.

In addition to these objectives, an overarching aim is that the experience contributes to the PI's career development by establishing, examining and extending her new theoretical perspectives. Through this project she will become a leader in the field of entrepreneurship and expert in the use of visual and linguistic methodologies in the management domain. It will also provide her with invaluable experience in project management, research methods, user communication and engagement, and international networking. This will enable her to apply for larger research grants in the future that include international comparisons, studentships and management of staff, and ensure that both this and future research projects have a significant impact on policy circles.

The PI has determined six central research questions, and developed a plan for dissemination and user engagement which together with the support of two very experienced mentors, will help her meet these objectives. Research findings will be discussed at international including AOM and EGOS conferences, and disseminated through the publication of theory-driven, empirical and methodology papers in the highest impact international journals including as the Academy of Management Review and Organizational Research Methods.

Summary

Describe the proposed research in simple terms in a way that could be publicised to a general audience [up to 4000 chars]

In the wake of the global economic crisis entrepreneurship is increasingly seen as a means to enhance economic performance in the context of scarce public funds and recent discussions have centred on the idea that governments...
should develop policy which is instrumental in developing entrepreneurial activity. One critical way governments can support entrepreneurs is helping them to be more successful in acquiring financial resources needed to initiate or expand their venture. Entrepreneurs (particularly technology ventures) are likely to face considerable challenges in engaging resource providers in their ideas given the lack of tangible predictors of competence or evidence that the venture will eventually be successful.

Existing research in entrepreneurship focuses on two main approaches "the cognitive" and "the institutional" perspectives, but neither lends itself easily to being transferred to practical entrepreneurship training. The cognitive perspective focuses on personality traits of entrepreneurs which are seen as innate and relatively stable over the life of the entrepreneur so offer little opportunity for development in other individuals. The institutional perspective highlights the cultural symbols entrepreneurs employ (such as an education from a top business school or a high calibre founding team) to make the venture seem credible to key groups. This approach does not explain how those who do not meet these culturally accepted norms can also achieve funding.

This project will employ the PI's new theoretical perspective recently published in a high impact US academic journal which offers a more integrative understanding of the entrepreneur within their social context by focusing on the language and body language entrepreneurs use to persuade investors to support their new venture. If the communication skills of entrepreneurs are viewed as central to the achievement of funding, it follows that these behaviours can be identified, assessed and developed in others. Working with one end-user (who have been involved in the design and will help implement and disseminate the findings) 30 technology entrepreneurs will be identified to take part in the project. Over the period of the project three studies will be conducted. Study 1 (a linguistic analysis of videotaped pitches to investors) will develop insights into the form, frequency and function of language and body language used by entrepreneurs. Study 2 (an in-depth visual ethnographic study) and Study 3 (an experimental study) will provide information on whether these tactics have an impact on investor's decisions.

The potential impact of this research is three-fold. First this research has the potential to offer considerable strategic benefit to policy-makers and professional associations involved in the training of entrepreneurs. Among other impact activities, state-of-the-art training materials will be developed and used within Leeds Enterprise Centre, Connect Networks and posted on-line at Start-Up Britain. Secondly, this project is likely to have significant impact on the field of entrepreneurship as the PI's new theoretical approach has the potential to overcome the problems with and reconcile the two existing major perspectives in entrepreneurship. Thirdly the project uses innovative approaches to data collection (visual ethnography) and analysis (techniques adapted from linguistics). This project will mainstream these methods within the management community and will build capacity through training new researchers in these techniques. The PI's research experience and support of experienced mentors will help ensure the project is ethically sound, analytically strong and well-managed. Previous work on visual methods, her expertise in analysing gesture and language and her academic and practitioner contacts, means the PI is ideally placed to carry out this work and ensure it has the highest possible impact on both academia and policy.

Academic Beneficiaries

Describe who will benefit from the research [up to 4000 chars].

The theoretical approach and innovative methods used in this research will have significant benefit for academics in the business and management community. To date, research on entrepreneurial cognition and research on the institutionalization of novel ventures have tended to remain relatively self-referential with a significant gap between them as a result of the rather different scholarly traditions and methods associated with positivist psychology and interpretive sociology. Through empirically examining and extending the PI’s theoretical approach, this project offers the potential to integrate existing understandings and develop a more comprehensive view by examining how individual entrepreneurs use metaphors in speech and gesture to make a venture seem familiar and legitimate when seeking financial support. Given that cognitive and institutional approaches are the dominant theoretical frameworks within business and management, mainstreaming this new theoretical approach which has the potential to build a bridge between these approaches will have...
a major impact on the field.

Value is also seen in the methodological contribution this research provides through applying techniques from social anthropology (visual ethnography) and linguistics (analytical protocols for the analysis of speech and gesture) into the business and management domain. Although commonly used across the social sciences visual ethnography has not been part of management researchers' methodological tool kit. In addition, intricate and detailed linguistic analyses are rare in business and management research. While academics in the field do recognise the importance of metaphoric language, at present there is no clear criteria for metaphor identification and work in this area is characterized by a high level of abstraction. This research will mainstream techniques from linguistics and introduce business and management researchers to rigorous linguistic protocols to identify and analyse metaphors. At the moment gesture analysis is absent in business and management studies, so this research offers significant innovation through introducing researchers in this field to the important role non-verbal cues can play in communication in organisational contexts.

To disseminate this research to the International academic community this research will be published in high impact business and management journals. Building on her previous success in publishing in top US journals (e.g. AMR), the PI aims to publish at least one theory-driven paper, at least two empirical papers and one methodology paper in the highest impact international journals including Administrative Science Quarterly, Organization Science, the Academy of Management Review and Organizational Research Methods. She will also develop a proposal for a panel symposium at the 2014 and 2015 AOM Conference on "Gesture and Language in Management Studies" and put forward a track for the 30th and 31st EGOS Colloquiums on "Body and Gesture in Organizational Contexts" and present her research at EURAM in 2014/15. The findings and new approaches involved in this study will be disseminated to academics not only through journal articles but also through new interdisciplinary teaching modules run through the new ESRC Doctoral Training Centre at Leeds as well as transferred to researchers throughout the UK through the BAM research training gateway and the InViso network. The PI's engagement with the University of Leeds, regional, national and international networks will enhance the project's academic profile. In Leeds, the PI will benefit from her participation in the Inter-disciplinary c-TIE group and the Leeds Enterprise Centre. At a national level the PI is involved in the International Network for Visual Studies. Internationally the PI is embedded in the World University Network and the AOMa (she is an active member of both the Organizational and Management Theory and Entrepreneurship Divisions).

Staff Duties

Summarise the roles and responsibilities of each post for which funding is sought [up to 2000 characters]

Salary contributions are requested for the principle investigator (PI). The PI will need to devote 40% of her time to the project over 36 months so that she can conduct research, deliver theory-driven, empirical and methodologies papers based on the research, develop networks and communicate with potential users. An average of one and a half days per week will be spent during the first 32 months (excluding two months in the Vrije University in Amsterdam). For the final four months the PI will spend an average of four days a week on the project to complete the Journal articles and engage in user communication and engagement.

To provide support for the project and the PI's future career development, the on-site mentor will meet with the PI on a weekly basis to discuss project management (including ethics), research methods development, user communication and engagement. The cost of the mentor's time will be covered by The University of Leeds.

The PI will be placed in the Vrije University (VU) for a period of two months where her off-site mentor is based. While there she will work full-time on the project, benefiting from her off-site mentor's expertise and work with a renowned linguist based at the VU. Her off-site mentor will meet with her twice every week during this time and discuss research methods development, international networks and research development. The cost of the off-site mentor will be covered by the VU.

A full-time research assistant will be employed for 18 months to support the collection and the micro-analysis of the visual
data. S/he will be fully trained in the use of the analysis of language and gesture equipment and ethical practice in research.

Impact Summary

Impact Summary (please refer to the help for guidance on what to consider when completing this section) [up to 4000 chars] Non-academic users of this research will include government policy-makers, bodies which implement government policy (e.g. 37), entrepreneurship educators (e.g. 38), support networks for entrepreneurs (e.g. 39), practitioners who work with entrepreneurs and entrepreneurs themselves. Governments are increasingly seeking to develop and implement policies which are instrumental in developing entrepreneurial activity given the important role it plays in the economy. If the communication skills of entrepreneurs are viewed as central to the achievement of funding, as opposed to an innate personality trait or aligning with institutional norms, it follows that these behaviours can be identified, assessed and developed in others. Current advice for entrepreneurs focuses on what should be "said" (i.e. the content of pitches) but there are few practical insights on how entrepreneurs can be most effective in communication with investors.

The research will provide the knowledge, understanding and materials for those interested in entrepreneurship education and development to support entrepreneurs in becoming more successful in acquiring financial resources to initiate or expand their ventures.

The research will be closely managed so as to ensure successful communication and engagement. First the PI will develop a project website to promote and disseminate the project (accessed through the c-TIE website). A press agency will be also be engaged to assist the PI with disseminating findings to the public (e.g. through press releases). The PI will also work alongside (who have been involved in designing this research project) to develop state-of-the-art training materials based on the results of this research. These materials will form the basis of training in how to pitch effectively to investors at their pre-investment workshops. Following the successful implementation of these training materials within Yorkshire they will be disseminated to the wider throughout the UK. The training materials will also be used within the Leeds Enterprise Centre and the International Corporate Leadership Programme at Leeds University. In addition, with the support of Professor (who), these training materials will be disseminated to those training graduate entrepreneurs within the National Council for Graduate Entrepreneurship training of entrepreneurs. They will also be posted on Start-Up Britain as the PI acts as a local ambassador for this organisation.

The PI will also leverage her own network and that of her on-site mentor Prof to ensure that the project has an impact at the policy-making/implementation level. Existing networks include contacts in the Development and the Department of the Environment. The PI will collect data from the to assess whether they are more successful in helping entrepreneurs secure finance following their adoption of the training materials developed by the PI. This will add further weight to the PI’s discussions with policy-making bodies. The PI's impact agenda will be supported by a well thought through training plan which will develop her knowledge exchange skills. She will also be supported by her on-site mentor who has an extensive practitioner network and established relationships with policy-making bodies. The project will also benefit from the PI's membership of the interdisciplinary c-TIE group in LUBS which has a special interest in technology ventures and is currently working on the commercialisation of regenerative therapies and devices in collaboration with the Faculties of Medicine and Engineering. Given the PI’s focus on funding for novel technology ventures this connection offers ideal future opportunities for technology companies to benefit from the PI’s research.

Ethical Information

Has consideration been given to any ethical matters raised by this proposal? Yes

Please explain what, if any, ethical issues you believe are relevant to the proposed research project, and which ethical approvals have been obtained, or will be sought if the project is funded? If you believe that an ethics review is not necessary, please explain your view (available: 4000 characters)
To investigate how entrepreneurs use language and body language to justify novel ventures and secure investment, the principle investigator (PI) will collect and analyse video-taped pitches and interactions, semi-structured interviews, financial information on the companies involved and structured evaluations of "actor" pitches by investors. In designing this study full account has been taken of the policy guidelines at the University of Leeds on the ethical conduct of research and the ESRC's Research Ethics Framework. This project raises a number of ethical issues surrounding the collection, storage and use of data.

Through a written explanation outlining the project details, the participants will be informed of the activities involved, the methods to be used, possible future utilization of the research findings and their rights and responsibilities before taking part. All participants (e.g. investors, employees, customers) will provide written consent prior to participation. The personal information of participants including financial data will be kept secure and will be held on a password protected computer as required by University of Leeds ethical guidelines.

Incorporating a visual dimension undoubtedly extends the ethical implications of this project. In visual research it is not possible to protect participants' identities to the same extent as in a solely textual study, as people's faces and places of work are potentially identifiable. Although as outlined above consent will be obtained at the outset of the research, following recent guidelines on conducting visual ethnographic research, the researcher will follow an approach known as "situated ethics". Within this approach rather than asking for "informed consent" the researcher works with the idea of "provisional consent". So rather than presuming at the outset of the research that the participants have agreed to be videotaped in any given scenario, the researcher should respond reflexively to various situations encountered and ensure that participants are always aware that they can stop the videotaping at any stage they feel uncomfortable. Participants will be informed if the PI plans to use their images at conferences, in publications or in benchmarking and training materials and their names and places of work will not be released. If participants are unwilling for their faces to be viewed this can be overcome through blurring the speaker's face on the video. This technique which involves altering pidation is commonly used in the linguistics field. In conducting the visual aspects of this research the ethical guidelines from the Society for Visual Anthropology will be followed.

The PI already has extensive experience of conducting ethically sound ethnographic, interview-based and visual research. The PI also has an established network of user contacts (e.g. [email protected]) that will help liaise with participants to ensure they feel comfortable with participating. In addition she will be further supported by two very experienced mentors, LUBS research staff, c-TIE group members who will all help ensure that the project is ethically sensitive and sound throughout. The RA who will assist in the collection and analyses of the video-data will be guided by the PI on how to collect and manage the research material and will also attend a Staff and Departmental Development Unit (SDDU) course on ethics in research. The University of Leeds demands very high ethical standards of all its researchers and research projects, and if this application is successful, it will be subject to the University's extensive ethical review process. This entails ethical approval by the Faculty level Research Ethics Committee according to guidance and principles set out by the University Ethical Review Committee.
Classification of Proposal

(a) User Involvement

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<th>Indication</th>
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<td>Execution</td>
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<td>Dissemination</td>
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<td>Training</td>
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(b) Strategic Priorities

Does your research fall within one or more of the ESRC's Strategic Challenges?

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<td>Understanding individual behaviour</td>
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<td>New technology, innovation and skills</td>
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<td>Environment, energy and resilience</td>
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<td>Security, conflict and justice</td>
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<td>Social diversity and population dynamics</td>
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Proposal Classifications

Research Area:

Research Areas are the subject areas in which the programme of study may fall and you should select at least one of these. Once you have selected the relevant Research Area(s), please ensure that you set one as primary. To add or remove Research Areas use the relevant link below. To set a primary area, click in the corresponding checkbox and then the Set Primary Area button that will appear.

<table>
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<tr>
<th>Subject</th>
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Qualifier:

Qualifier are terms that further describe the area of study and cover aspects such as approach and geographical focus. Please ensure you complete this section if relevant.

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<td>Geographic Area</td>
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Free-text Keywords:

Free-text keywords may be used to describe the programme of study in more detail. To add a keyword, you first need to search existing Research Areas by entering the keyword in the Search box and selecting the Filter button.

If the keyword is adequately reflected by one of the terms displayed below, click in the corresponding checkbox then select.
Save. If no potential matches are displayed, or none of those displayed are suitable, select the Add New button followed by the Save button to add it as a descriptor.

To add or remove those previously added use the links below.

Free-text Keywords
Entrepreneurship
Investor decision-making
Language and body language
Linguistic analysis
New venture funding
Non-verbal communication
Visual methods
Pathways to impact

The findings of this study will aid entrepreneurs in increasing the likelihood of them obtaining funding. In line with the ESRC’s strategic priorities this research aims to understand individual behaviour and decision making in the context of entrepreneurship by examining how entrepreneurs effectively communicate with investors and persuade them to fund their novel venture. The aim is to produce an account of how such interactions take place and how they result in more or less effective outcomes and why. Communication and user engagement efforts will enjoy strong mentor support. On-site mentor’s ESRC Evolution of Business Knowledge project was commended as having extensive and wide reaching impact and will use regular one-to-one meetings with the PI to offer advice on the best means of achieving a similar level of impact for this, and future projects. The PI will also enjoy the support of colleagues in the School’s the Centre for Technology, Innovation and Entrepreneurship (c-TIE) who have a wealth of experience in communicating with, and engaging research beneficiaries particularly technology based companies.

Short-Term Impact: During the life of the funding this project will highlight the important role verbal and nonverbal communication plays in whether or not investors fund new ventures. Firstly a project site will be established for project promotion and dissemination (access via the c-TIE website). A press agency will be engaged to assist the PI with disseminating findings to the public and the PI will also attend media training courses run by the ESRC and the Staff and Departmental Development Unit at Leeds (‘Senior Researchers Media Training’, ‘Engaging with the Media’, ‘Writing for the Web’ and ‘Writing for the Media’) to enhance public presentation skills for organisation presentations and press engagement. The PI has already been successful in engaging and managing relationships with the media (she recently had a piece on her research published in the Guardian and two pieces in the Yorkshire Post see CV) and these courses will further improve her skills. The project will have immediate benefit to one of the key users of this research (a not-for-profit company that supports regional technology businesses to find debt/equity funding) who have been engaged in the design of this project and will be involved in all subsequent stages of the project including dissemination of results (see letter of support). The results of this study will also be directly transferred to (a state-of-the-art training and education tool kit which will comprise a range of modules and workshops on entrepreneurial communication. will put this training to use immediately in bi-annual pre-investment workshops.

Medium-Term Impact: Up to one year after the funding, further benefits to practice from the training and education tool kit should be seen. With the support of this training and education tool kit will be disseminated to other stakeholders throughout the UK including
Through her contact at __________ the PI has already been in contact with members of these ____________ and they are very interested in using the new training materials in their own prefunding workshops. The PI is also a local ambassador for StartUp Britain which is a new campaign designed to celebrate, inspire and accelerate enterprise in the UK and has the full backing of the Prime Minister, the Chancellor and HM Government. The training materials will be made freely available on the StartUp Britain website and the PI will use this network to organise a series of seminars aimed at entrepreneurs throughout the UK where the results of the study will be summarised in non-technical language. It will also be ensured that the research impacts on the growing number of students across the UK with plans to set up small businesses once leaving university. This includes collaborating with Leeds Enterprise Centre (the PI already teaches in this Centre) and also the National Council for Graduate Entrepreneurship. C-TIE also runs the International Corporate Leadership Programme at Leeds University and an MBA module in Innovation and Entrepreneurship and the results will feed into the curriculum of the these programmes. In addition the training material will be used in the Goldman Sachs pilot business education programmes for over 50 entrepreneurs from across the region chosen for their high growth capacity which is based at LUBS.

**Long-Term Impact:** In the longer term, this work, and in particular the training and education tool kit has the potential to influence policy, both at a local, regional, national and strategic level. Through her network in c-TIE and mentor __________ the PI has contacts with those that make policy decisions in the region: The Regional Development Agency, Business Link, City Regions and other established organisations that implement government policies. For example he is currently a member of the Business Engagement Task Force set up by BIS (Department for Business, Innovation and Skills) led by David Willetts MP Minister of State for Universities and Science. The PI will also collect data from the ____________ to assess whether they are more successful in helping entrepreneurs secure funding for their ventures after they adopted the education and training tool created by the PI. This data will be used to persuade policy makers to set new requirements in the training of entrepreneurs. This tool will offer a means of inexpensive sustainable development of entrepreneurs which could be employed throughout the UK and help agencies involved in training entrepreneurs to support them more effectively. Through helping entrepreneurs develop their skills to attract funding, this in turn will make new ventures more profitable and add to the growth of the economy.
CASE FOR SUPPORT

INTRODUCTION

In the wake of the global economic crisis entrepreneurship has been increasingly seen as a means to enhance economic performance in the context of scarce public funds (OECD, 2009). Entrepreneurship provides significant benefits in terms of innovation, job creation and competitiveness and in line with the ESRC’s strategic priorities is one way the UK can help ensure sustainable growth within the economy. One key challenge that all entrepreneurs face is acquiring the necessary resources for venture creation and growth despite the absence of a proven track record, obvious asset value and profitability. Existing research has not fully addressed this issue which has primarily been explored by two related yet largely separate bodies of literature. The first, generally referred as the cognitive perspective equates the process with antecedent cognitive scripts or characteristics of entrepreneurs such as the richness and specificity of the entrepreneur’s cognitive prototypes or mental models (Baron & Ensley, 2006; Korunka et al, 2003; Krueger et al, 2000). A main limitation of this perspective is that it treats the individual entrepreneur in isolation from his or her social environment and ignores the formative effect of language on thought processes and the construction of meaning (e.g. Fauconnier, 1997; Langacker, 1991). A second body of literature under the broad heading of institutional theory, has located entrepreneurship within a social context and has focused on cultural and symbolic realms of meaning construction around new ventures (e.g. Lounsbury and Glynn, 2001; Zott and Huy, 2007). Established conventions, codes and symbols are often absent in novel and dynamic entrepreneurial contexts which leaves institutional theory unable to explain how individual entrepreneurs become legitimate despite an absence of widely shared institutional frames (Suchman, 1995).

The PI has recently argued (Chen et al., 2011; Mayer, 2010) that the respective foci and limitations of both traditions suggest they are complementary. Drawing on the broad perspective of sensemaking (Weick, 1995) she has developed a new theoretical perspective which allows for a combined cognitive and symbolic conception of the resource acquisition process. Specifically this theory elaborates how in social contexts of speaking, entrepreneurs use metaphorical language to create a meaningful opportunity for a novel venture and attempt to convince others of that opportunity in order to acquire the capital and support needed to further develop. By using metaphorical language to induce images or scenes of how new ventures are likely to function in an industry and grow, entrepreneurs as well as relevant others (e.g. investors and employees) achieve some ability to comprehend the opportunity for a venture and the future consequences of decisions and actions. This work, recently published in the prestigious Academy of Management Review (AMR) (Impact Factor: 7.8) has inspired a discussion piece also published in AMR from esteemed US scholars Mitchell et al (2011). They comment on the PI’s work as being path-breaking and suggest this theoretical perspective provides “a catalyst for the continuing emergence of ‘post-boxology’ in entrepreneurial cognition research”. They have also invited her to contribute to their new peer-reviewed “Handbook of Entrepreneurial Cognition” which brings together top scholars working in the field of entrepreneurial cognition.

This research project seeks to empirically examine and mainstream the PI’s theoretical work and extend this theory to account for how entrepreneurs use non-verbal body language alongside verbal metaphors to justify novel ventures. Research in cognitive linguistics has shown that manual gestures (coordinated movements of the arms and hands that spontaneously accompany speech) serve an important communicative function (Alibali et al 1994; Beattie & Shovelton, 1999; Kelly & Church, 1998). In the entrepreneurship domain Chen et al (2009) have highlighted that animated facial and body movements can have an impact on investor’s assessments of how passionate entrepreneurs are, but fail to specify what types of body movements are effective and how this relates to verbal communication. In line with the PI’s theoretical work on the communication potential of metaphors, this project will examine a sub-set of gesture known as metaphorical gesture (see Kendon, 1994). Like their verbal equivalent, this type of gesture represents ideas that are conceptual and abstract, but are expressed through manual movements (e.g. a nascent technology metaphorically illustrated through two hands with cupped palms facing upwards as if holding an actual
RESEARCH QUESTIONS
The project will involve three studies. Study 1 will develop detailed insights into the form, frequency and function of metaphorical language and gesture used by entrepreneurs. Studies 2 and 3 will provide information on whether these tactics actually have an impact on investor’s decisions. Research questions are outlined below:
1. What patterns of language are used by entrepreneurs when they seek to persuade and justify their venture to investors and to what extent are verbal metaphors present?
2. What types of gestures are used by entrepreneurs when making pitches to investors and to what extent are metaphoric responses?
3. How does prior experience (both in terms of general entrepreneurial experience and industry-specific experience) impact on entrepreneurs use of metaphorical language and gesture?
4. Is metaphorical language more effective than non-metaphorical language in persuading investors to fund ventures?
5. Are metaphorical gestures more effective than non-metaphorical gestures in encouraging investors to invest in the novel venture?
6. Are entrepreneurs who employ metaphorical language and gesture simultaneously more likely to be effective in securing funding from investors?

RESEARCH METHODS
Sample: The sample will comprise thirty independent technology entrepreneurs (i.e. ventures that are not sheltered by sponsoring organizations, e.g. spin-offs). Much existing research on entrepreneurship has been dominated by start-ups in a wide range of low-growth industries (e.g. so called “mom and pop” firms). In line with the ESRC’s strategic priorities and interest in supporting new technologies, this study will use entrepreneurs from technologically sophisticated industries where new ideas are potentially of great importance and can contribute significantly to the economy. Given their “liability of newness” (Stinchcombe, 1965) technology entrepreneurs are particularly likely to confront significant challenges in communicating their ideas to investors. The entrepreneurs will be identified with the help of an end-user of this research (the regional business support agency [link omitted]) (see letter of support)). They have been involved in the design of this project and will be involved in all subsequent stages of the project.

Data Collection and Analysis: Data collection and analysis will run simultaneously throughout the project. Corresponding with the ESRC’s interest in innovative methodologies, this project will employ a visual ethnographic approach to collect data and techniques adapted from cognitive linguistics to analyse data which have as yet been largely absent from the field of business and management. Since entrepreneurs have not been examined in this way previously this data does not exist elsewhere. Ethical issues have been considered and if successful this project will be subject to review by a Faculty Ethics Committee.

Study 1 - This study will result in a large scale data set which will provide detailed insights which relate to research questions 1, 2 and 3. The study will involve videotaping the entrepreneurs pitching their ideas to specialist technology investors during a series of regional investment forums. Prior to their pitches, the viability of the new technology and readiness for investment will be assessed by [evaluation method]. The technologies chosen will be of similar potential. The entrepreneurs will be interviewed by the PI in order to gain insight into their background, previous experience and develop in-depth knowledge of the new technology. To minimise variation the entrepreneurs will take part in a workshop where they will be given guidance on the structure of their pitch. Variation due to environmental factors (e.g. socio-political context, business...
climate, available resources) will be minimised by focusing on a confined geographic area. The videotaped pitches will be micro-analysed by the PI supported by a research assistant as outlined below:

**Metaphor Analysis:** Although metaphors are recognised as being integral to communication in organisational contexts (Alvesson, 1993; Cornellissen 2005, 2006; Weick 1999) the processes used in analysing metaphor in business and management studies are often unclear with no criteria being provided for specifying what is, and what is not, metaphorical. This is highly problematic as intuitions about language use have been found to be variable and not a good guide to motivations and cognitions behind actual language use and comprehension (Sinclair, 1991). This research will draw on a rigorous technique from the field of linguistics known as the Metaphor Identification Procedure (MIP) which reliably identifies metaphorically used words in discourse (Pragglejaz Group, 2007). Within this technique a metaphor is defined as the use of a word or expression (as single lexical units) that does not literally apply to the topic that was spoken about in the context of the speech. This often involves words and expressions that have a contextual meaning that is different from their basic and most conventional meaning (Pragglejaz, 2007).

**An example of how the MIP will be utilised is outlined below:**
1. The PI will read an entire transcribed entrepreneur’s pitch.
2. For each word or expression in the text, she will each establish its meaning in context, that is, how it applies to an entity, relation, or attribute in the situation evoked by the text (contextual meaning).
3. For each word or expression, she will then determine with the use of a dictionary whether it has a more basic contemporary meaning in other contexts. Basic meanings tend to be more concrete (what they evoke is easier to imagine, see, hear, feel, smell, and taste), related to bodily action, more precise or historically older (Pragglejaz, 2007).
4. If the lexical unit has a more basic current-contemporary meaning in other contexts than the given context and if the contextual meaning contrasts with the basic meaning but can be understood in comparison with it, it will be marked as metaphorical.

**Gesture Analysis:** A functional system of coding gestures will be used to analyse the gestures (as in Cienki 2005, adapted from Müller 1998), drawing on techniques from linguistics.

**An example of gesture coding is outlined below:**
First, the PI will view a video of an entrepreneur’s pitch without sound and divide the movements of the entrepreneur’s hands into gestures and non-gestures. Non-gesture movements include self-adapting motions such as touching the hair or face which are excluded from linguistic gestural analysis because of their lack of semantic content (i.e. they do not relate to the linguistic content of the speech). The shape, motion, placement, and orientation of the entrepreneur’s hands in each gesture will then be transcribed again without sound. The initial gesture coding is not influenced by the analysis of the words and meaning is not fixed too early in the analysis. Following this, the forms and movements of the gestures will be interpreted in light of the entrepreneurs’ words, focusing on the utterances closest in time to the gesture. The gestures will be categorised into representational gestures which depict semantic information or beat gestures which mark points of emphasis in speech but “do not present a discernible meaning” (McNeill, 1992: 80).

Representational gestures will be further subdivided into gestures which refer to a physical, concrete referent based on the content of the speech (iconic, deictic), or gestures which are used in a metaphorical way to refer to an abstract notion in terms of a physical form or movement (Cienki, 1998; Kendon, 2004).

**Study 2:** After the coding and categorization of the entrepreneurs’ use of language and gesture, eight extreme (ideal) of metaphor and gesture, eight extreme (ideal) cases will be identified that feature noticeably high or low levels of verbal and non-verbal metaphors. Ideally but depending on the data these cases will be divided into four conditions: (1) high use of metaphoric language and gesture (2) high use of metaphorical language but little use of metaphoric gesture; (3) high use of metaphorical gesture but little use of metaphorical language (4) little use of metaphorical language or gesture. This approach follows Eisenhardt’s (1989) recommendation for a theoretical sampling approach that involves between four and ten extreme cases in which the phenomenon of interest is transparently observable. These extreme cases will be followed up using a visual ethnographic approach (Pink, 2011) which involves videotaping the entrepreneurs in interactions with various stakeholders including potential
investors. The metaphors in language and gestures used by the entrepreneurs in these interactions will be assessed using the techniques outlined above. In line with conventional ethnographic work this study will also include in-depth interviews with the entrepreneurs and their team. In addition, those who eventually invest in the venture will also be interviewed to investigate their reasons for investing in the venture. It is thought that entrepreneurs who consistently use more metaphorical speech and gesture should be more effective at securing investment. To confirm these assertions the financial acquisitions of the firms will be accessed and compared during the period of the grant.

**Study 3:** The final study will experimentally examine the cause and effect relationship between entrepreneurs' communication skills and investors' decisions. An actor will be employed and videotaped acting out each of the four conditions detailed above. In each condition the technology, content, setting and presenter of the pitch will be exactly the same: the only aspect which will differ will be whether or not the actor uses metaphorical speech and gesture according to the four conditions (see Study 2 above). An expert panel of venture capitalists will be used to rate the effectiveness of the presentations using a structured evaluation from adapted from Chen et al (2009). Each condition will be viewed by sets of twenty investors (80 in total). The main dependent variable of interest will be investors' hypothetical investment decision, which following Chen et al. (2009) will be a simple dichotomous variable (I would invest, I would not invest). To provide a more sensitive assessment of investors' attitudinal reactions, the PI will also measure behavioural intentions using a 4-item Likert scale, anchored from 1 = 'Strongly Disagree' to 5 = 'Strongly Agree' (sample items will include 'I would definitely invest in this venture' and 'I would recommend this venture to other potential investors') and perceived preparedness (including the substance and coherence of the presentation). The effects of metaphors and gestures on investor reactions will be analysed using a combination of analysis of variance (ANOVA) and logistic regression. The effects of investors' age, gender, experience and education level will be controlled for by entering these as covariates in the analyses, since these factors might presumably influence how investors viewed the presentations.

**EXPECTED OUTPUTS AND IMPACT**

To disseminate this research to the international academic community the PI will aim to publish at least one theory-building paper in AMR, and at least two empirical papers in the highest impact international journals. The PI will also develop a proposal for a panel symposium on her research at the 2014/2015 Academy of Management Conference and develop a track for the 26th European Group for Organizational Studies Colloquium and present her research at EURAM in 2014/15. Given the innovative methods employed in this research another output from this research will be the development of material to be used in the training doctoral and early career researchers in these new methods disseminated through the new ESRC Doctoral Training Centre at Leeds. The PI is already involved in this centre and runs the advanced qualitative methods course. Through her mentor Prof she will disseminate these training materials through the British Academy of Management (BAM) research training gateway. She will also leverage her links with the ESRC sponsored Seminar Series International Network for Visual Studies in Organizations (inViso) to ensure that these resources are available to be used by the members of this group to use in their own teaching and training. The PI is already an active member of this group and has recently contributed to their visual methods book “The Routledge Companion to Visual Organization” (see CV).

The research will also produce extensive outputs for non-academic users. First the PI will create a project website accessed through the c-TIE website to publicise the project and employ a public relations agency will undertake dissemination activities such as writing and distributing press releases. In addition the PI will work alongside (who have been involved in designing this research project) to create state-of-the-art training materials based on the result of this project which will form the basis of ‘s training for pitching to investors. In addition, the wider based throughout the UK will have access to these training materials and the PI and representatives from will work to ensure they can effectively deliver the material to entrepreneurs. These training materials will also be used within the Leeds Enterprise Centre and the National Council for Graduate Entrepreneurship. In addition, through the network, the PI will ensure that the project that the outputs reach those at policy-making levels. This includes contacts in The Regional Development Agency
and the Department of Business, Innovation and Skills (BIS) who have already expressed interest in the PI’s proposed body of research.

The potential impact of this research is three-fold. First this research has the potential to offer considerable strategic benefit to policy-makers and professional associations involved in the training of entrepreneurs. Among other impact activities, state-of-the-art training materials will be developed and used within Leeds Enterprise Centre, Connect Yorkshire and the wider Connect Networks and posted on-line at Start-Up Britain. Current advice for entrepreneurs focuses on what should be “said” (i.e. the content of pitches) but there are few practical insights on use of various forms of language and body language in presentations to investors. Secondly, this project is likely to have significant impact on the field of entrepreneurship as the PI’s new theoretical approach has the potential to overcome the problems with and reconcile the two existing major perspectives in entrepreneurship. Thirdly the project uses innovative approaches to data collection (visual ethnography) and analysis (techniques adapted from linguistics). This project will mainstream these methods within the management community and will build capacity through training new researchers in these techniques. The PI’s research experience and support of experienced mentors will help ensure the project is ethically sound, analytically strong and well-managed.

INSTITUTION AND MENTORS
The PI received her PhD from the University of Leeds in 2007 and has worked in Leeds University Business School since then. During her time at LUBS the PI has enjoyed extensive support for her research and development. Following her PhD she secured a one year ESRC Post-doctoral Fellowship. This was followed by a two year fellowship funded by the University of Leeds. She has so far flourished in this business school environment and has published in top level academic journals, worked with world renowned researchers (e.g. Joep Cornelissen) built international collaborations (e.g. through World University Network) and developed connections with academics in other departments and disciplines who use similar innovative methods (e.g. John Prosser from Education who ran the ESRC RDI on visual methods). She is involved in the ESRC Doctoral Training Centre and runs a module for this centre on Advanced Qualitative Methods. With the support of her on-site mentor Prof. [Name Redacted] and off-site mentor Prof. [Name Redacted] the PI hopes to continue to thrive within LUBS and become a leading international academic in her chosen area of research.

Onsite Mentor: Prof. [Name Redacted] was recently Head of the Management Division and is now [Name Redacted] at LUBS. He also heads the C-TIE group of which the PI is already a member and she already has an excellent working relationship with him having worked with him on a number of projects. His previous ESRC awards have been graded as ‘outstanding’ and he has an excellent grasp of the ESRC expectations for the delivery of outcomes promised by award holders. He is on the REF C19 Business and Management sub-panel for 2014 and has an in-depth understanding of the nature of impact and will support the PI in ensuring this project has maximum impact.

External Mentor: [Name Redacted] is a professor of organisational communication and was the PI’s mentor during her ESRC Post-doctoral fellowship. The PI already has a series of high-level publications alongside [Name Redacted] and their partnership so far has been extremely successful. [Name Redacted] is an established management scholar with a range of 4* publications (including 3 AMRs). By having [Name Redacted] as an external mentor this will allow the PI not only to build international networks by spending time at the Vrijie University in Amsterdam but also the opportunity to have continuous access to expert knowledge on metaphor, gesture analysis and entrepreneurship. A letter of support from the Vrijje University is included with this application.

PROGRAMME OF SKILLS DEVELOPMENT
The aim of this research skills development programme is two-fold. First, to make sure the project is well-managed and has maximum impact; and second to guarantee that the experience gained makes a significant contribution to the PI’s career development by establishing her as a leading international entrepreneurship scholar and mainstream her new theoretical perspective.
Academic Leadership: The aim of this proposal is to develop the PI as a future academic leader. It is therefore essential to further develop her research leadership skills. The PI has some experience in managing research grants including her PhD project and ESRC Postdoctoral Fellowship (see ESRC Today for extensive outputs) and is currently supervising three PhD projects. This project will give her experience of managing a larger scale project alongside managing and developing a research assistant. The PI will benefit from Leeds’ Staff and Development Department Unit training courses “Introduction to the role of PI” and “Leading and managing in an Academic Environment” designed to provide researchers with the skills needed to manage large-scale research projects. She will also have regular meetings with her mentors (particularly her on-site mentor) who will use their extensive experience to guide her on how best to manage this project and future projects. The PI will enjoy the support of LUBS research staff, and also benefit from participation in the Centre for Innovation Technology and Entrepreneurship (cTIE) (led by mentor [redacted]). This will include access to their budget to purchase any equipment needed to assist the project and the provision of office and meeting space during the project and the dissemination of results.

Research Methods Development: A further aim of the proposed research is to mainstream innovative methodologies including visual ethnography and cognitive linguistic techniques for the analysis of verbal and nonverbal metaphor. The PI already has significant expertise in these techniques developed during her PhD and Postdoctoral Fellowship. Her expertise will be strengthened through ‘training through experience’, namely, a further strengthening of her use of these techniques through implementing them throughout the project. To ensure she remains up-to-date with the very latest techniques, the PI and the RA will attend a workshop run by the Society for Visual Anthropology and two workshops on methods of language and gesture analysis run by renowned gesture scholars Cornelia Muller and Alan Cienki. Becoming expert in these techniques will allow the PI to develop capacity within the management community by training PhDs and more experienced researchers in these new techniques (including BAM research training gateway and the new ESRC Doctoral Training Centre through the Leeds LSSi unit). The PI will also apply for further funding from LUBS for support for studentship related to this project where the PI can closely mentor another researcher in the use of these techniques, encouraging future innovation in management research.

Knowledge Exchange Skills: Training, together with communication and engagement with academics, practitioners, entrepreneurs and policy-makers will be invaluable for project impact and the PI’s career development. The PI will take ESRC and SDDU courses on media skills (‘Senior Researchers Media Training’, ‘Engaging with the Media’, ‘Writing for the Web’, and ‘Writing for the Media’) to assist with the communication of information to and engagement of non-academic communities including policy-makers, entrepreneurship educators and entrepreneurs themselves. The PI has already had her research published in media articles for example in The Guardian. Communication and user engagement efforts will enjoy strong mentor support. Prof [redacted] is particularly well connected. For example he is currently a member of the Business Engagement Task Force set up by BIS (Department for Business, Innovation and Skills) led by David Willetts MP Minister of State for Universities and Science. He also has a number of other high profile practitioner contacts which the PI can avail of throughout the period of this grant.

International Networking: One of the most important outcomes of this experience will be the international academic networks that are extended and strengthened. The proposal above will involve two month long placements in the VU University in Amsterdam where the PI will have the opportunity to continue her collaboration with external mentor [redacted] who is a communication expert and her interdisciplinary work with expert linguist [redacted]. Based on this application the PI is already discussing future collaborative work on new perspective on entrepreneurial cognitive with expert entrepreneurship researcher Prof [redacted] from Texas Tech. In addition as part of the WUN Network based here at Leeds, the PI has developed collaborative relationships with the University of Illinois and the University of Alberta which she hopes to develop over the period of the grant. Through developing these networks over the period of this project the PI hopes to organise a cross-country study (Canada, Holland, Britain, US) to examine her perspective in different cultural contexts.
Justification of Resources

Principal Investigator at 0.4fte: to fund the PI to spend an average of 15 hours per week on the project during the 36 months period (based on a 44 week working year). This time commitment will be matched by the Faculty's research workload allowance and study leave which she will be entitled to over the period of the grant. This amount of time is needed for the PI to conduct the research (preparation, fieldwork, analysis) delivering a series of publications and develop state-of-the-art training materials.

- Research Assistant at 1.0fte for 18 months. The Research Assistant will be post doctoral level and will work alongside the Principal Investigator to support the collection and analysis of the research data. The Research Assistant will also accompany the Principal Investigator on the training trips run by the Berlin Gesture Centre and Society for Visual Anthropology and will have the opportunity to attend a conference and present papers with the PI. This will ensure that the Research Assistant is provided with appropriate developmental opportunities during the project lifetime. This post will be match funded by the Faculty. As such only 50% of the salary and related IDCs and Estates costs are requested from the ESRC. The Research Assistant will support the PI during the analysis of the data collected during Study 1 and in the collection and analysis of data in Study 2. The RA will begin working with the PA six months into the project and will be full time for 18 months. Funds are requested to support the cost of 50% of the costs of employing the research assistant with the remaining 50% being provided by the Faculty.

- IT support – funds are requested to cover the cost of support the design and construction of a project mini-site to engage with both academic and practitioner audience. Costs are based on quotations received for similar website requirements for previously funded projects.

- Supporting materials- funds are requested to cover the design and printing of project materials to be used to disseminate details of the project to external audiences. Training materials will also be made available via the project mini-site.
• Public Relations agency – funds are requested to cover the cost of engaging the services of an external public relations agency who will undertake dissemination activities such as the writing and distribution of press releases. Rates are based on known agency daily rates.

• Transcription costs – funds are also requested to cover the costs of using an external transcription agency and figures are based on known agency rates for this activity.

• Travel and subsistence costs – funds are requested to cover travel, accommodation and subsistence costs for the following:

  o 2 x month long placements at the Vrije University (VU) Amsterdam to work alongside and . Costs are based on known average flight costs, plus University of Leeds accommodation and subsistence rates.

  o Costs to cover attendance at training courses at the Berlin Gesture Centre – including fees, accommodation, travel, subsistence costs. It is envisaged that the PI and the RA will attend these sessions together.

  o Costs to cover attendance at workshops run by the Society for Visual Anthropology. Costs are included to cover workshop fees, travel, accommodation and subsistence costs. All are based on University of Leeds published reimbursement rates.

  o Funds are also requested to cover attendance at conferences during the project (EURAM, AOM, EGOS). Costs are based on average costs for attendance at these conferences in previous years, and include conference fees, travel, accommodation and subsistence costs. All are based on University of Leeds published reimbursement rates. The PI will match the contribution from the ESRC with funds from the Faculty’s conference fund (which operates on a match funding basis and entitles to those staff presenting papers at conferences up to £2000 per annum to support this activity).