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Reviews

Philipp Grunewald / Louise Cooke

Discursive structures in knowledge co-creation:
Analysing interactions with SKAD and Social Network Analysis

Zusammenfassung: Wissen und Macht sind zentrale Konzepte in der internationalen Entwicklungszusammenarbeit. In dieser Arbeit werden Machtstrukturen in zwei Fallstudien anhand der wissenssoziologischen Diskursanalyse untersucht; im Fokus steht dabei die entwickelte Methodologie. Die wissenssoziologische Diskursanalyse wird zur Studie der reziproken Beziehungen zwischen formellen und informellen sozialen Strukturen verwendet und in dieser Arbeit werden einige ansatzspezifische Stärken identifiziert und aufgeführt. Darüber hinaus wird diskutiert wie Strukturierung auf zwischenmenschlicher Ebene praktiziert wurde und wie diese existierende soziale Strukturen beeinflusst haben und vice versa. Die Studie belegt, dass die wissenssoziologische Diskursanalyse für Forschungsprojekte dieser Art geeignet ist.

Schlagwörter: WDA, Soziale Netzwerkanalyse, Methodik, Dispositiv, Beziehungen, soziale Strukturen, Macht, Wissen

Abstract: Power and knowledge are central concepts in the practice and analysis of international development. This study employs the Sociology of Knowledge Approach to Discourse Analysis (SKAD) to look at power structures in two case studies in international development. The developed methodology is the focus of this paper. SKAD's insights into the circular relationship between informal and formalised social structures and the contribution SKAD can make in this domain are outlined. Furthermore, it is discussed how, in the open and invited spaces observed in the case studies, structuration was practically conducted and how this process was influenced by pre-existing institutional structures and vice versa. It was found that SKAD can support enquiries of this kind.

Keywords: SKAD, Social Network Analysis, Mixed Methods, Dispositif, Human relationships, Social structure, Power, Knowledge

1 Introduction

This multidisciplinary study explores a field of enquiry at the boundaries of information science and development studies. It is concerned with the facilitation of knowledge processes – processes of knowledge exchange and co-creation – in the international development sector; a subject sometimes called *knowledge for development*. Additionally, this enquiry considers the importance of human relationships and social networks (and power) and studies these in knowledge intermediation projects. Thus, the research explores a new set of questions in development cooperation and shows how different approaches to

the facilitation of knowledge processes can impact the relational outcomes of knowledge intermediation projects.

The purpose of this study was to provide practitioners in the development sector with academically grounded and developed insights and ideas that could potentially improve their practice. The focus was in particular on practitioners facilitating knowledge exchange(s) between development practitioners in developing countries (South-South knowledge exchange).

To be able to deliver valuable insights and ideas for practitioners and academics, the research aimed to investigate how knowledge intermediation projects in the international development sector are shaped by their approach (demand initiated, facilitator/funder initiated), especially in terms of the relationships they foster.

The methodology developed, especially the integration of Social Network Analysis (SNA) with the Sociology of Knowledge Approach to Discourse Analysis (SKAD), is the focus of this paper. It begins by introducing the background to the study, and then focuses on the methodology adopted. The paper also introduces some findings of the study, before drawing final conclusions.

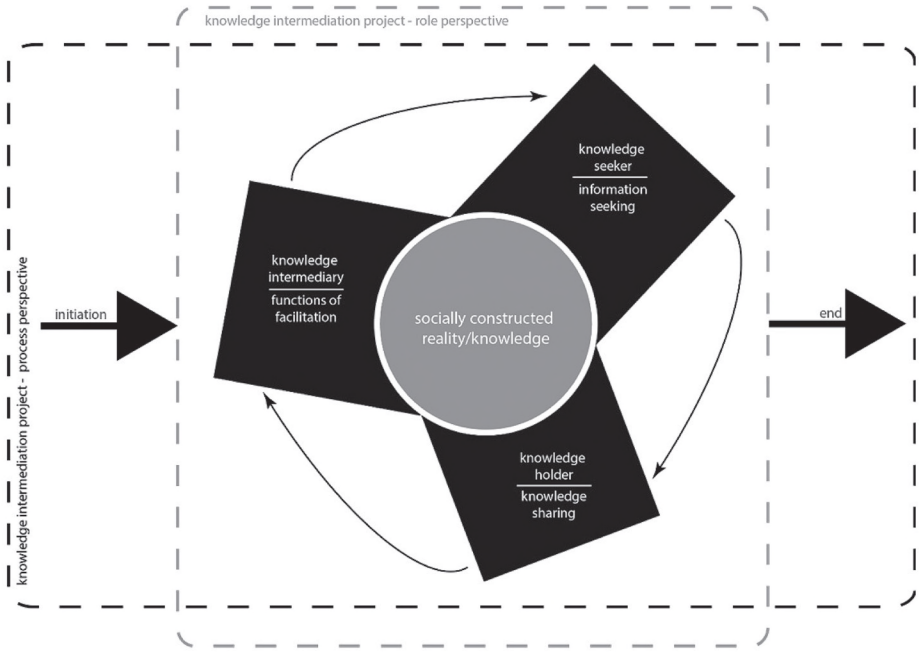
2 Background

Knowledge for development has a rich history. Akude (2014) looked back at the origins and meanings of the concept. He proposes a three tier understanding of knowledge for development: entailing the micro-, meso-, and macro-level. The micro represents the personal sphere of knowledge for development, meso the institutional, and macro the sectorial. However, the main point put forward in his review is that modes of »global« knowledge production in the development industry are dominated by the »West«.

This understanding is reinforced by Hornidge (2013, 2014) who argues that the construction of knowledge for development (as well as the construction of »knowledge society« and »knowledge«) has been led by »Northern« actors. She demonstrates that ideas of the knowledge society (and with it conceptions of knowledge) have come to be accepted in policy debate first in ›developed‹ countries and then got exported, mainly through the work of individuals (e.g. scientists) and institutions (e.g. international governmental organizations), to emergent economies and, so called, developing countries.

Hornidge (2014) concludes that both, »knowledge society« and »knowledge for development«, are discourses that are normative, factual, and hegemonic. They are normative since knowledge society and knowledge for development are portrayed as leading standards by the above mentioned actors through authoritative global discourses. They are factual since these concepts left the realm of the normative discourse and were picked up by governments and other institutions as guides for action (e.g. policy making, investment, etc.). They are hegemonic since the discourse of »knowledge society« originated in western nations and was from there introduced into the realms of development and poverty reduction via international governmental organisations. She argues that developing nations have been led to adopt (sometimes voluntarily) ideas portrayed in these dis-

Figure 1:



Roles and processes in knowledge intermediation projects and relevant concepts

courses. These ideas have not only arisen in very different contexts but also reinforced competitive disadvantages through developing nations entering established and highly competitive sectors (sidelining investment in competitive advantages). In Hornidge's eyes, knowledge society and knowledge for development are the latest in a variety of discourses that claim to have found the ›golden bullet‹ for economic growth and development.

The above stated situates this study in an established discourse about knowledge for development that at the macro-level shows signs of hegemonic and ›Western‹ dominated knowledge processes. This study looks at knowledge processes and in particular at knowledge intermediation, which is defined as:

> »Any processes and practices concerned with informing, linking, matchmaking, engaging, collaborating and building of adaptive capacity (Jones et al. 2012) of two or more external knowledge producers/holders and users/seekers, whether these are explicitly labelled as knowledge intermediation or not.« (Mansfield/Grunewald 2013, S. 11)

A plethora of terms exists that are employed to describe processes and practices that are similar to what is termed, for the purpose of this paper, knowledge intermediation. Knowledge translation, knowledge exchange, knowledge sharing, knowledge mobilisation, Knowledge*, knowledge brokering, etc. are just some examples. Knowledge intermediation is understood to have a distinct focus on processes and functions; whilst most

other concepts have a tendency to objectify knowledge and to separate out different states in which that ›knowledge‹ is contained.

Knowledge intermediation is explored in this paper with regards to South-South knowledge exchange; another concept coined under the influence of the World Bank (World Bank Institute, n.d.). This, in turn, is situated in discourses around south-south cooperation.

> »›South–South Cooperation‹ contains a number of meanings associated with horizontal power relations, mutual self-interest and absence of conditionalities in which countries with recent development experience share this with the rest of the South. It is about learning from other countries' domestic, post-colonial experiences when facing specifically southern development challenges – as opposed to the northern, imperial experience.« (Eyben 2013, S. 3)

South-South cooperation and triangular cooperation, where institutions like the UNDP, Worldbank or International Labour Organization (ILO) get engaged in facilitating south-south engagements, serve as a backdrop for the studied intermediation processes. It becomes apparent how the dynamics of cooperation and collaboration are central in understanding development. However, all of the outlined academic discourses are situated at Akude's (2014) macro-level; the policy level at which country representatives engage in broad discussions.

This study investigates how these macro-level dynamics play out at the meso and micro levels. The study explores the roles various actors play in intermediation projects. Mirroring the above triangular and South-South relationship patterns, one can see how, in knowledge intermediation projects, there are three main roles: the intermediary and facilitator of knowledge processes (usually backed by a [northern] funding body); someone with knowledge to share (a southern knowledge holder); and someone who can learn from that (a southern knowledge seeker); these roles are illustrated in Figure 1 above. The study not only shows how these roles apply to knowledge intermediation projects (meso level) but also addresses the relational elements at the interpersonal level (micro level). This is a combination of questions and linking of ideas that has not seen academic attention before.

Research question and objectives

The following research question and objectives are derived from the study's aim as presented in the introduction of the paper, as well as emerging from the study of the literature and the participatory engagement with stakeholders (e.g. development practitioners). The question is stated as: how can knowledge intermediation projects be monitored and evaluated with regard to the relationships they entail and facilitate?[1]

1 This is one of three research questions the study was concerned with. This particular research ques-

To answer this question, the research objectives were to:

i. Build a methodology that uncovers the relationships in a knowledge intermediation project.
ii. Use, modify and develop categories that can be used to analyse interaction, conversation and discourse between actors in knowledge intermediation projects.
iii. Test categories that can be used to analyse interaction, conversation and discourse in knowledge intermediation projects.
iv. Reflect upon categories and methodology.

3 Methodology

In order to achieve the research aim and objectives, a mixed methods methodology was developed based on a pragmatist approach that explored two case studies. Participatory techniques were used to identify the two case studies, one was mainly a facilitated online knowledge exchange forum, the other a blended (online and offline) knowledge exchange intervention. These case studies were treated as discourses in their own right and a discourse analysis was conducted on the interactions occurring as part of each of the projects. The case studies both intended to connect practitioners and policy-makers within and across southern nations via online fora, email communications, study visits, web conferencing, and face-to-face meetings with facilitators and each other; this means they are intermediating south-south knowledge exchanges.

In Creswell's eyes pragmatism is a philosophical approach that suggests that some of the classical discussions around positivism (and/or objectivist, empiricist, rationalist) and social constructivism (and/or interpretivist, naturalistic, hermeneutic empiricism) are less crucial than they are perceived to be. In his opinion, pragmatists believe that both, a reality external to the mind and one within the mind, exist (Creswell 2003). It emphasises that the purpose of the research needs to be considered in the choice of a strategy of enquiry. One important aspect of this research is that the research project shall be valuable to practitioners. One way of ensuring that this is the case, and frequently employed in international development (studies), is ›participation‹.

On participation

Participatory methods, as supported by Mayoux (2006), were used throughout the research process. It ensured the relevance of the study for practitioners, improved the researcher's understanding of the problem, and increased validity by benefiting from their

tion is the focus of this paper. However, for the purpose of completeness, the other two research questions were: b) How does the initiation act influence the relationships between actors in a knowledge intermediation project? And c) What implications might this (answers to research question b) have for the intermediation of knowledge processes?

knowledge of the problem's context. However, participatory methods needed to be appropriate for the addressed questions and needed to be balanced with the inherent requirements of an academic research process (Laws et al. 2002).

It needs to be noted that the participatory methods were used to support the research process rather than to gather data for the analysis of the two case studies. Whilst this is an artificial separation it helps to understand that whilst the participatory methods are mentioned first they are actually seen as secondary to the approaches and methods that are primarily responsible for gathering data in the case study analysis. The latter data constitutes the core of the research project and delivers the findings essential for responding to the research questions and objectives. Pragmatism led in the establishment of the participatory methods. Mostly communications methods and media were employed that people already used (e.g. email) and/or were convenient for the researcher to establish (e.g. blog, online survey tool).

The first tool employed to engage practitioners was a blog where practitioners (and academics alike) interacted with some of the ideas related to the research process. Regular blog posts addressed research related issues. However, due to the project requirements a certain degree of caution needed to be exercised; the usage of some of the academic's own contributions by others for the purpose of publication, etc. could have had a detrimental effect on the researcher's ambition to complete a doctorate. Nevertheless, in the researcher's judgement the benefits a participatory approach entails with regard to the purpose of this research project outweighed some of the risks.[2]

The blog, on the one hand, provided a platform for interaction accessible to external stakeholders. However, to attract interest networking was crucial. The researcher identified two online communities of practice to whom the theme of the research is of particular relevance; the Knowledge Management for Development (KM4Dev) community and the Knowledge Broker Forum (KBF) community. The Eldis community was situated on the periphery as well, but due to its more general coverage of development related issues (rather than knowledge related issues within the sector) the decision was made to focus on the two immediately relevant communities of practice.

In practice, this resulted in many conversations and interviews with a variety of stakeholders that influenced the course of the project and thematic foci. The degree of engagement with people interested in the project varied over the course of implementation. Over the three year period interactions were most intense within the first year and picked up again in the third year. As outlined below, this included mainly email conversations, exploratory interviews, the Blog, online communities of practice, and other social media engagements.

2 This perception is partly due to the fact that without contributions from practitioners this research would not have been undertaken in the first place. The researcher, at the time of the proposal himself a practitioner, was engaged in discussions with other individuals in his own organisation, and with individuals from the Institute of Development Studies, University of Sussex and from the Overseas Development Institute. Additionally, further discussions in the Knowledge Broker Forum and Knowledge Management for Development network (KM4Dev) influenced the purpose and aims of the research project at this early stage.

A medium used to engage stakeholders directly was email. Over the course of the project the researcher was engaged in personal email conversations about the research topic (e.g. on traditional knowledge, attribution, indicators, etc.) with a minimum of 23 practitioners, consultants and people in other implementation related roles. Additionally, the researcher has engaged in email conversations with a minimum of 17 academics that were either researching on similar themes and/or whose work was considered a building block of the conducted research (e.g. in terms of methodology).

Another way in which email was employed was through the participation in the two online communities of practice mentioned above. This, the most useful aspect of the participatory efforts, enabled the researcher to get to know practitioners (to some extent also fellow academics) that work on or are interested in the areas relevant to the research topics pursued in the project (e.g. knowledge management, information management, monitoring and evaluation, etc.). In itself, the consumption of nearly daily emails about problems, questions, issues, sources, projects, etc. that occupied people in those communities was invaluable. However, engagement was not only passive but the researcher used those communities increasingly to test resonance of ideas.

This was done in conjunction with the blog mentioned above. From September 2012 till November 2013 24 blog posts were written (and publicised through the communities of practice) on topics such as knowledge management, dialogical communications, etc. They resulted in 21 comments (on the blogposts) that led to short interactions with their authors. As a participatory element the blog was mainly useful in two respects:

1. Comments on blogposts were usually very valuable and some of those triggered further conversations via email; either directly or on the mailing lists of the communities of practice.
2. The blog served as a platform for the publication of small surveys (one question) that were circulated through the communities of practice. E.g. Who mostly initiates knowledge exchange processes in international development? Do current considerations of the complexity (theory/science) of international development projects render log frames and indicators useless? How large a role do personal relationships play in knowledge exchanges?

In the timeframe outlined above 13 questions were asked on the blog that generated 184 (quantitative) responses and 85 (essay) comments. Thus, the »one question survey« method can be considered very successful in engaging people on diverse issues related to a research project whilst gathering insights that can help with the definition of the topic and research questions.

Besides that, the intention was to use a blog (considered a *social* medium) for dialogical communication on the basis of position statements (blogposts) (Kaplan & Haenlein, 2010). However, the amount of conversations the blogposts triggered can be considered as limited and at some point the two communities were asked if the blog should remain open; no responses were submitted to that question. The researcher closed the blog be-

cause the fact that there were no responses was considered a more important indicator than the usage of the blog (3,200 sessions and 1,900 unique visitors in the timeframe outlined above).

The blog was replaced with a »mission statement« (hosted on www.medium.com) that outlined the general position of the researcher and encouraged people to get in touch via twitter or email (two media that appeared more suitable to dialogical communication). Since this approach took up less time the researcher could focus on the existing online communities and participation in those (especially the very lively KM4Dev community of practice).[3]

Another benefit of regular blogging activity, especially in the beginning of the research project, was that it acted as an online repository of information related to the topic of the research project that was accessible to all stakeholders, including the researcher. This enabled reflection upon the researcher's own position in the process. However, this was a secondary function of the blog and other methods are more generally applied within the academic field to reflect upon the researcher's own position with regards to the study.

In ethnographic type studies this sort of reflection is of crucial importance because it is recognised that the researcher is part of the social environment that is being studied. This is commonly called reflexivity. A lack in reflexivity is also a frequently stated criticism directed against positivism (and naturalism) and its claims regarding objectivity. The inclusion of the participatory approach as part of the mixed methods strategy employed in this study notonly recognises the importance of reflexivity but makes it subject to management (as far as that is possible) and tries to use this fact to the benefit of the enquiry (Hammersley/Atkinson 2007).[4]

Common practice amongst ethnographers is the usage of fieldnotes to record their observations and interview data. They are also used to reflect upon the researcher's own thinking and as a method that generates information on how that thinking changes over the course of the research project. This is one way in which ethnographers address issues of reflexivity (Hammersley/Atkinson 2007). Since stakeholder participation is stretching from the beginning of the research project till the end the researcher is, in a way, in the ›field‹ for the entire process. Therefore, it seems most appropriate to use a research diary as a method to ensure reflexivity. That a research journal (or diary) can serve the purpose outlined is recognised by various authors; it might serve to record insights, thoughts, feelings, and decisions (Blaxter et al. 2006). Due to the purpose of the method, the research diary covered exclusively the reflections on interactions with stakeholders and everything related.

3 This led to co-organising a workshop for the community and guest-editing an issue of the (community's) open access journal »Knowledge Management for Development Journal« (previously with Elsevier).

4 A discussion of the criticisms of reflexivity based on the political ›nature‹ of research and subjectivity is not necessary at this stage since issues of advocacy have been discussed as part of the research philosophy and the necessity to balance stakeholders' interests and the inherent features of an *academic* enquiry has been recognised.

These social interactions were undertaken through the methods and tools described above but also by another method that Mayoux (2006) suggests as part of her integrated research process, which is the exploratory interview. In her model exploratory interviews are undertaken at the scoping stage in the process and, as the word ›exploratory‹ already suggests, are used to explore the general theme the research intends to address. As part of the participatory methods they also help to identify the interests and needs of practitioners, and support the identification of key stakeholders and informants. In the broader context of this methodology they also helped identifying potential case studies for the analysis of knowledge intermediation projects.

Interviews can be undertaken in a variety of formats. Since the purpose of these interviews is of an exploratory nature they are unstructured and conversational. At this stage the interviews were also not recorded since this could take away from the conversational (naturalistic) character of the exploratory interview (Willis 2006). However, the information, perspectives, and opinions obtained in the interview and the influence these had on the thinking of the researcher are captured in the research journal. In the following some key stages and decisions shall be outlined with the help of data taken from the research diary that illustrate how the main focus/topic of the research was defined and refined. Initially the research project was expected to focus on an

> »online and an offline knowledge intervention and I thought that M&E could address issues/ask questions about effectiveness and efficiency. This idea came originally from my [work] experience in BSHF where that was a question. This would have helped decision makers to choose which intervention to use in a certain situation. Due to the input I got from different people I shifted towards the idea of power relations and how these play out if the facilitator approaches the actors that are supposed to exchange knowledge or vice versa. This, on the other hand, can help decision makers/knowledge brokers to choose the approach to their work that they follow. It is, thus, situated at a different level.«

During October 2012 there were two main directions under consideration; one focussing on power and another one on intervention efficiency. The prior emerged out of engaging people in discussions about the research and from reading online interactions in the communities of practice. The diary gives insight into why one topic was gradually favoured.

> »Part of the reason why I seem to pursue the power topic rather than the intervention efficiency topic is that I heard back from [case study manager] and they are happy to work with me on [project]. Thus, I kind of have the two case studies with [case study 1] and [case study 2]. Now I can theoretically focus on how relationship dynamics are subject to power relationships. It is definitely an interesting topic and there are many things to explore.«

However, this did not lead to a decision yet. Over the next couple of months more discussions were observed (in the communities of practice), more exploratory interviews conducted and the blog (and especially the one question surveys) were used to gage stakeholders' interest in certain aspects. This led to the gradual reshaping of the two topics. From the above outlined they changed into: »One is about the approach (supply-, demand-, facilitator-led) to facilitating knowledge exchange and the other about how to facilitate knowledge exchange (types of intervention) and M&E«.

The diary shows that further deliberation (taking into account further discussions with the managers who had indicated an interest in providing access to case studies, information science and development literature and suggestions by the researcher's academic supervisors) led to the realisation that there are overlaps in the two topics that could be used to bring them together.

By the beginning of 2013 (more than six months into the project) the diary entries get clear on what the exact topic ended up being. In one of the exploratory interviews a case study manager explicitly outlined an interest in the initiation act and how that influences a programme, which »reaffirmed my decision to go down this path (topic)«. It was decided that a focus on initiation, power and relationships was of relevance to interested parties whilst the attempt was made »to give the topic more of an M&E spin« whilst still being able to address the topic academically within the timeframes of the project.

It can be seen that the focus of the study and the methodology were influenced by many people through various communication channels. Whilst the topic was influenced greatly by the two managers of the two case studies it came about in an exploratory iterative process. The participation in the organisation of a KM4Dev community conference and workshop was of great help in this regard as well, even though that came at a later stage.

Subsequently it was difficult to keep investing time into the participatory element since case studies were chosen and most time was occupied gathering data and analysing data. The final stages of the project was then characterised by increased engagement again with the parties responsible for the case studies. Drafts of the case study analyses were distributed to various involved individuals who had declared their interest.

In a phone conversation (and via emails), the manager of the facilitator/funder initiated case study pointed out that in the analysis it only becomes clear at the very end why things were managed and implemented in the way they were. By doing this s/he confirmed that what had been observed of the case study and has been described in the analysis chapter can indeed be linked to the initiation act(s). Her/his perception was that the things described naturally (due to initiation) had to turn out this way.

Staff members, working on the demand imitated case study, were not able to read the analysis that had been shared with them. However, they gave feedback after having been presented with insights from the entire study by the researcher. They gave critical feedback on some of the recommendations outlined in the conclusions, which was then incorporated.

Overall, the feedback from staff members working on the two case studies indicated that the findings presented in the analysis were fair representations of their work. Also, the insights generated were perceived to be interesting and useful for improving their un-

derstanding of their own knowledge intermediation activities. Since the relationship dimension is something that had not received particular attention to that point (especially to such a depth), thus, many new areas of relevance were identified.

Besides the conversations with case study owners, one meeting with an interested stakeholder (an institution implementing knowledge intermediation projects) was carried out and the insights generated by the study were presented. They found the recommendations very useful and suggested further knowledge intermediation projects that they thought had interesting approaches to knowledge intermediation that could lead to further insights if studied.

As a concluding remark on the participatory elements of the research design it can be said that the various repositories of interaction and participation (online forums, blog, emails, and interview notes), together with the reflections on the researcher's thinking in the diary, gave a coherent and interesting picture about the results and impact of the participatory elements at the end of the research.

On mixed methods design

Mixed methods research design enables the researcher to draw on the strengths of different strategies and methods. Using both qualitative and quantitative data is perceived to lessen the impact of the limitations inherent to either strategy (Creswell 2003). Mixed methods research encourages the researcher to choose the approach and methods most appropriate to gather insights into the various aspects of the phenomenon under study.

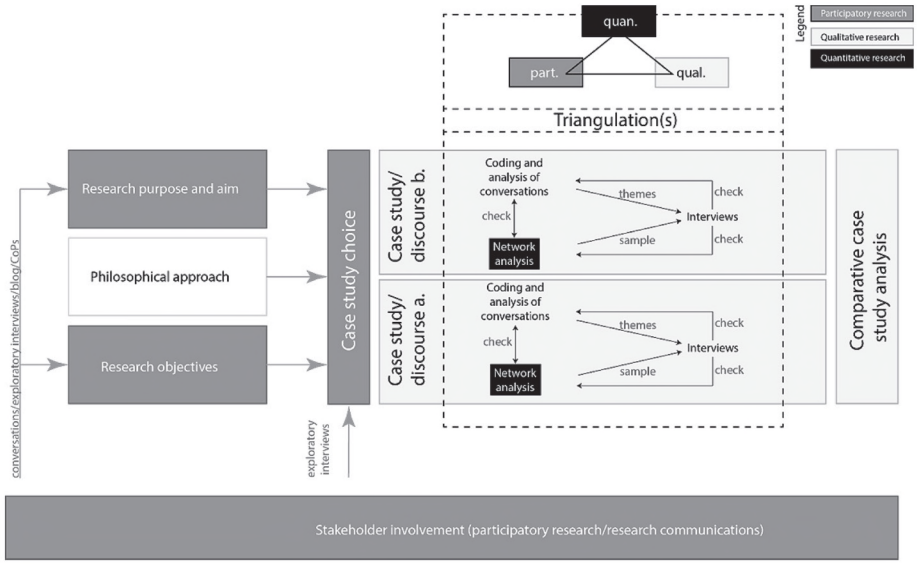
Due to this research topic sitting on the fringes of highly qualitative processes (relationship building and maintenance) and generalised structures (institutions), a variety of methods were necessary to shed light on these boundaries from various angles. As a result, this study does not attempt to have the depth, in terms of qualitative analysis, of an ethnographic study, neither does it attempt to have the breadth, in terms of broad database and resulting generalizability of findings, of a purely institutional-accountability approach.

The research question, purpose and aim of this research project all focus on different layers of social reality. At a micro-level there are the relationships between different individuals who participate in the knowledge interventions, at the meso-level there are social structures and dispositif, and at the macro-level there are institutional structures.[5] This research attempts to uncover connections between micro, meso and macro-levels and, thus, the focus of the investigation is on the linkages between these different layers.

The methods applied at each level/layer needed only to provide *sufficient* data for discussions of their interconnectedness to be warranted. Each method offered insights on the aspect to which it is applied but the focus of the study lay on unearthing and discussing connections between the different layers. This means that in this research it was ex-

5 Note: These are not to be confused with the above used classification by Akude (2014). From here onwards, this study works with these descriptions of the relevant layers of social reality.

Figure 2:



Methodology – from a procedural viewpoint

plicitly not attempted to explore single aspects and layers in the greatest possible depth through applying individual methods in all their potential richness; e.g. the social network analysis is »merely« looking at binary relationships rather than a fully-fledged application of all statistically available tools that come with that method. The project was planned as a sequential mixed methods procedure; which means that initial results of the investigation were used, elaborated upon, and expanded as the investigation progressed (Creswell 2003).

In the following the usage of case studies is justified. It is then argued that treating these case studies as discourses is a valid approach when attempting to understand relationship creation and maintenance, human interactions and their connection to institutional settings. Finally, the methods enabling the researcher to address the specified objectives are outlined.

The research attempts to compare a modest number of cases on the basis of one independent variable, (projects') initiation act. Additionally, it attempts to develop the dependent variables through an inductive process. This sort of research is described as case-oriented research or comparative case research.

> »This design aims to make comparisons *between* a relatively small number of cases (small-N-research). It compares the behaviour of theoretically important variables *across* cases, but also uses within-case analysis to explore how these similarities and differences relate to the specific context and dynamics of each case.« (6/Bellamy 2012, S. 80).

Looking at patterns and correlations in the proposed way is sometimes described as explanatory case study research. Explanatory case studies are used to establish an understanding of causal relationships. This kind of research usually includes the testing of predefined propositions. However, this is not the case in this study since no hypotheses about relationships were established before data gathering began. Additionally, as outlined above, this research does not attempt to determine causal relationships. »Causal relationships«, as well as »dependent« and »independent variables«, go in the direction of attribution; however, this research enquires about contribution. Thus, even though the case studies conducted for the purpose of this research share some aspects of explanatory case studies, they are closer to what is described as exploratory case studies (Berg 2006).

In the following both case studies are *briefly* introduced; briefly because the study itself is outlining the inner workings and important factors that make them what they are. The presentation is kept to a minimum for the reader not to form a detailed picture of the case studies based on conventionally applied categorisations and descriptors. In this way the reader is able to understand the case studies based on the actual social processes and emergent structures rather than normative and descriptive terminology used by the institutions themselves to situate their work in the development sector.

Case study 1 was a programme that attempted to connect individuals concerned with development issues across Latin America, Asia and Africa. Thus, it is aiming to reach a very broad audience. It comprised an online learning platform that facilitates knowledge sharing between individuals and that provides knowledge objects for the study of six thematic areas. It was funded by a governmental aid agency and is, essentially, a facilitator/funder initiated knowledge intermediation project. The programme was split in its delivery into six thematic areas and for the purpose of this study the focus was on one of these thematic areas and the institutional context that came with it. Data were gathered from the online learning platform, recordings from online conference calls, recordings from a study visit to Latin America, and interviews.

Case study 2 is a technical information service that provides answers to all technical questions raised in relation to a »developing country« context. Thus, this service also has a very broad audience. They accept enquiries from around the world but also focus on Latin America, South Asia and Africa. Part of their service is fulfilling a knowledge intermediary role. This knowledge intervention is essentially demand side (knowledge seeker) initiated due to all efforts being based on responding to enquiries. The current financial arrangement is that part of the money that comes into the organisation through a partnership agreement with a major government donor is allocated to the programme. The management in the head office then shares that budget with the country and regional offices. Data were gathered from email conversations, observation of face-to-face sessions in South Asia and interviews.

Each case study was considered to be a discourse in its own right. This was due to the fact that this study looks at interventions that have a determined beginning (initiation event) and end, and the fact that this research attempts to look at communicative (inter-) action and how social structures emerge from such processes. Relationships are built through routine interaction. Thus, the necessary focus on communications and the ac-

tual conversations between individuals led to the exploration of conversation and discourse analysis. After reviewing various approaches to discourse analysis and conversation analysis the most appropriate approach was identified in the sociology of knowledge approach to discourse analysis (SKAD) (Keller 2011).

The research question and objectives (with their focus on relationships and emergent social structures – power structures in the light of the initiation act) suggest looking at each case study through a discursive lens. The theoretical basis for the study builds on Berger and Luckmann's (1967) work on the social construction of reality, as well as the discourse studies presented by Foucault (Foucault/Gordon 1980; Foucault 1970). However, SKAD can be seen as an approach in its own right by offering a sociology of knowledge approach to analysing the circulation and production of knowledge in connection with institutional structures. Structure is perceived to be continuously formed and re-formed and, thus, itself based on past structure formation. It allows looking at the individual discourse event and connecting it to the institutional environment (Keller 2013). SKAD pays explicit attention to relationships and different aspects of those (including power), which are crucial to this study.

SKAD examines the discursive construction of symbolic orders which occur in the form of conflicting social knowledge relationships and competing politics of knowledge. SKAD follows Foucault and examines discourses as performative statement practices which constitute reality orders and also produce power effects in a conflict-ridden network of social actors, institutional dispositifs, and knowledge systems. It is concerned with reconstructing the processes which occur in social constructions, objectivization, communication, and the legitimization of meaning structures or, in other words, of interpretation and acting structures on the institutional, organizational or social actors' level. It is also concerned with the analysis of the social effects of these processes. This includes various dimensions of reconstruction: sense making as well as subject formation, ways of acting, institutional/structural contexts, and social consequences; how, for example, they become apparent in the form of a dispositif (Keller 2011, S. 48 f.).

SKAD enables the reconstruction and interpretation of discourse structures that are essentially power structures and can facilitate an understanding of discursive conflicts (power struggles). Discourse can be open public discourse but also special and closed discourse: the latter being the case for the two case studies. However, Keller outlines that the concept of »dispositif« allows for a thorough consideration of the »infrastructure of discourse production and problem solving« (Keller 2011, S. 56). Seen in this way dispositifs are means of external power realisation and connect and mediate discourse and wider fields of action.

> »SKAD is therefore not just textual analysis of signs in use, communication, text or image research. It is simultaneously case study, observation, and even a dense ethnographic description, which considers the link between statement events, practices, actors, organizational arrangements, and objects as more or less historical and far-reaching socio-spatial processes.« (Keller 2011, S. 56)

This is also in line with the study of human relationships through interpretative approaches. »Relationships are constituted through interaction ... In other words, a focus on the *relationship in the interaction* is just as valid as a focus on the *interaction in the relationship*« (Manning /Kunkel 2014, S. 4). This justifies the attempt of understanding relationships via a focus on interactions through discourse analysis; however, Manning and Kunkel also connect relationships to what is here studied via dispositifs.

> »A relationship is always embedded in its culture and, as such, is embedded in that culture's assumptions, values, histories, and artifacts. Those elements of culture can be explored in conjunction with qualitative data to look for connections that might not otherwise be intelligible without a rich, open-ended data source.« (Manning/Kunkel 2014, S. 436)

However, SKAD is not actually a method. It does not include particular data gathering methods. Thus, it was merely the chosen approach to how the case studies were seen and analysed. In the following section the chosen methods are outlined and the choice is justified by comparing different methods and connecting them with the case studies whilst having the objectives and purpose of the research in mind.
The first method elaborated is closely linked with the SKAD approach outlined above.

> »SKAD … favours sequential analysis of textual data directed towards its own research questions, to give an account of discursive claims and statements beyond the single utterance or discursive event: line by line, step by step development, debate and choice of interpretations, in order to build up a socially accountable analysis of frames (Deutungsmuster), phenomenal structure, classifications and so on. The open coding procedure elaborated by Grounded Theory indicates this way of methods.« (Keller 2011, S. 61 f.).

As outlined above, the data to be analyzed were communications between people (in different media). This makes a method necessary that allows the analysis of qualitative data. A relevant set of methods to this effect is thematic analysis. Thematic analysis is a process in which the researcher goes through various phases with the aim of identifying and defining the main themes in the data (Guest et al. 2012; Boyatzis 1998).

However, SKAD suggests that the actual utterances in a limited sequence of discourse are a reproduction and a transformative exercise of discourse structures. Coding (along grounded theory lines), it is explicitly stated in the above quote, can give access to those dynamics and reveal structures in place and shed light on the processes of production and modification (Keller 2011, 2013).

Coding is a way of making sense of qualitative data through categorisation. Utterances are analysed by searching for generic properties that enable categorisation. In grounded theory, open-coding is the first step in this process and undertaken by going through texts, line by line, and underlining utterances that might serve as categories. At this stage every word is open to interpretation because meanings are not yet attributed. Through

the coding process, patterns gradually emerge and categories become more defined. This procedure of categorisation leads, in grounded theory, to theory building. It is a bottom up approach exemplar for inductive research because it does not base categories for data analysis on existing theories (Lindlof 1995).

However, to reiterate, this does not mean that the chosen *methodology* is grounded theory. As outlined above, the methodology is a mixed methods approach of analysing two case studies that are treated as discourses as described in SKAD. To analyse the available qualitative data (utterances) the coding *method* is used as it is described in literature on grounded theory.

Coding theory

In her account on coding Charmaz (2006) distinguishes two stages; initial (open) coding and focussed coding. In the initial coding phase the analytic categories are drawn and emerge from the data. The researcher is required to approach the data with an ›open mind‹ and stay as close to it as possible. Preconceived concepts should be kept out of the process to the greatest extent possible to ›see‹ the data as undisturbed as possible. The initial codes are provisional and remain in that state since the researcher wants to keep a flexible approach to categorisation for further data to be organized in as representative a manner as the initial data (Charmaz 2006).

With initial coding there are different sizes of units of data. Grounded theorists conduct word-by-word coding (categorising every word), line-by-line coding (categorising every line of text), and incident-to-incident coding. The analysis conducted in this study draws on a mix of line-by-line coding and incident-to-incident coding. This approach is chosen because, even though SKAD underlines the importance of »every line« in the social construction of meaning, the initial coding procedure (in both case studies) showed that this was not the most valuable unit of analysis in the light of the research question. Thus, to follow the necessities determined by the research question leads at this point to a diversion from what is suggested in the SKAD literature in that what is coded can be described as statement-by-statement (further discussed below where examples are given).

Also, the research question makes the application of some predetermined codes, roles (facilitator, knowledge holder, knowledge seeker) necessary. Again, on the basis of the research question a diversion from, in this case, coding literature in »purist« grounded theory needed to be implemented. These predetermined categories contributed to the decision of coding statements; using a smaller unit of analysis (words, line) was unnecessary and any larger (utterances/ instances) would not have sufficed to answer the research question and to address the research objectives.

The second phase in the process outlined by Charmaz (2006) is focussed coding. In this phase the analytic labels that have been established in initial coding are used to analyse larger segments of data. However, even at this stage the researcher still tries to establish the adequacy of the categories. If data does not fit with the theoretical constructs re-coding previous data could become necessary.

However, not all coding processes start with open-coding and/or follow the process outlined by Charmaz; e.g. deductive coding uses already established categories that might have been identified in literature or by other methods used in a study (Lindlof 1995). In grounded theory deductive coding is a highly debated issue because it is somewhat counterproductive to the bottom up approach it promotes. Nevertheless, there are concepts, like theoretical coding, that underline the necessity to connect initial and focussed coding with pre-existent categories and theories (Glaser 2005).

This, however, is only possible when such categories exist. As argued above, applying a discourse analysis to knowledge intermediation projects has not been attempted yet and, thus, categories for analysis needed to emerge from the data through the coding process (besides the roles of facilitator, knowledge holder, and knowledge seeker).

Coding application

Coding was applied to written (extant) texts and audio recordings in both case studies; in the facilitator/funder initiated case study it was used to analyse conversations occurring in an online forum and meetings, and in the demand initiated case study it was used to analyse conversations held via email and in face-to-face encounters. For both case studies initial coding was undertaken; meaning, codes emerged from the respective data. The data, in the facilitator/funder initiated case study, were mainly textual. All of the participants' contributions to the online forum have been textual in nature; only the facilitator and some knowledge holders contributed in audio and video formats (e.g. interviews, presentations). In the, demand initiated case study, the same is the case; most data were textual in kind because the interactions between people (especially at the international level) were conducted via email.

All of these interactions can be described as natural data. What makes the data sources of this study natural is the fact that interactions and utterances under study would have occurred without the involvement of the researcher (McCreaddie/Payne 2010). The researcher assumed the role of a participant-observer, with an emphasis on observation rather than participation. This, in practice, meant that besides informing participants (for ethical considerations) of the fact that this research is being undertaken, the researcher did not participate in the discussions. From a coding perspective this resulted, for example, in one coded statement (in the facilitator/funder initiated case study) under the researcher's name and three coded responses. These response outline that the research addresses an interesting topic and that authors of those statements wished the researcher luck in his pursuits, e.g. »Dear [researcher], Really a good interesting topic, Go ahead, get PhD degree soon«**.** In the analysis of communication (seen as behaviour) that occurred in the online forum (of the facilitator/funder initiated case study) a variety of themes emerged. During open coding an attempt was made to code every piece of information that might be relevant to the research question and objectives. These codes were then refined and grouped until a coding scheme emerged that was fit for purpose. The overarching themes that emerged were:

1. People: *Who made this contribution?* Utterances were attributed to the person that made them. Entire contributions to the online forum were coded under a person's code. Thus, giving an indication on how often people contributed to the discussion.
2. Purpose of statement: *What seems to be the purpose of a statement?* For the coding of the purpose of a statement entire contributions were broken down into statements. The beginning and the end of a statement was determined by a perceived change in the purpose of what is being said. Due to the inductive nature, data gathered are diverse and form a crucial part of the qualitative analysis.
3. Role: *What role does the person fulfil with this statement?* These roles were taken directly (deduced) from the research question and, thus, included: knowledge holder, knowledge seeker, and facilitator. The role taken was attributed to individual statements (rather than contributions) and correlated strongly with the perceived purpose of a statement.
4. SNA: *Who talks to/with whom?* The social network analysis was conducted manually. Very early on it became clear that using automated (computerised) approaches to social network analysis would not deliver as accurate insights since in many cases participants did not use threading appropriately or consistently, and many references to each other were made in a way that a software dependent analysis would have overlooked. As a result, people's incoming and outgoing statements were coded manually.
5. Tone of statement: *What is the tone of this statement?* With this code it was attempted to capture the tone of a statement; e.g. friendly, excited, eager, etc.

These five coding themes emerged as the main themes for the analysis of the utterances occurring in the online forum. The entirety of the textual data was coded in the themes one, two and three outlined above. Theme one resulted in 1375 coded utterances; these are separate contributions. Theme two resulted in 1812 coded utterances; these are the contributions broken down into different statements that are defined by their purpose. Theme three resulted in 1413 coded utterances; these often overlap with theme one and/or two but sometimes span various statements and not the entire contribution.

The following statements serve as an illustration of how contributions were coded and split into statements. Three archetypal contributions have been chosen as examples to illustrate common coding procedures.

> *Example 1:* »In Bangladesh there are 64 districts and 21 agro-ecological areas. As we know each area soil is suitable for some specific products. At first we can make a list of important products based on necessity, exporting demand and values. After selecting the product list, making discussion with experts we can choose the specific region for growing specific products. We have to ensure the logistic supports for the farmers. In this way farmers will be more expertise for growing products and also easily connect with dynamic market.«

This contribution has been coded under the person's name, has the purpose (code) of »sharing knowledge, opinion, view, experience« and, thus, the person is taking the role of

a »knowledge holder«. Since the entire contribution can be coded under a single purpose (and role) the entire contribution is a single statement.

> *Example 2:* »Hi [*person's name*]. Thanks for your post. Would be happy if you respond to my queries below: 1. From your experience, who should be responsible to form co-operatives and how as development initiate that? 2. Are all the cooperatives you mention sustainable and gaining from the mechanism? What are the failure factors?«

This contribution has been coded under the person's name and is broken down into various statements. The first statement ends with »post«; the purpose of that statement is first and foremost to thank someone else for their contribution (purpose code: »thanks for knowledge or source sharing«); also, the tone of that statement is »appreciative«. However, that statement allows deriving more insights. In the same statement the author indicates that s/he has engaged with someone else's material and (one can safely assume that that person) has reflected upon it. The second coded purpose of the first statement is thus »reflecting upon informal contribution« (informal contribution is a contribution made in the forum's discussion threads [rather than a formal contribution by the facilitator or other expert invited by the facilitator]). Reflection on someone else's contribution leads to the understanding that this person has taken the role of a »knowledge seeker« in this instance. The second statement encompasses the remainder of the contribution which has been coded under the purpose of »asking someone for information, opinion«; however, this code has two sub-codes (»addressed« and »not-addressed«) and since this instance of knowledge seeking was »addressed« (answered by someone else) it was coded as such. Quite naturally, this second statement is also coded under the role of »knowledge seeker«; the tone of the second statement has been coded as »curious«. Additionally, since this is a contribution that engages with someone else and, actually addresses them by their name (which makes it easily observable), this entire contribution has been coded as part of the social network analysis. It has been coded with the author's name within the coding header »outgoing« and with the addressed person's name within the coding header »incoming«.

> *Example 3 is the response to the knowledge seeking contribution outlined in example 2 above:* »hello [*person's name*], thank you for your queries, In Nepal, Governmental agencies, Non governmental Organization and development partners can formed co-operatives. After forming cooperatives, they have to register into the goverment system. So if you are working in development project, form cooperatives keeping in mind that they need to have common interest and objectives, regarding question 2, definately all are not successful. But some are successful which is natural in my opinion. The main failure factors we found are their capacity to run business. Their motive is appreciable. We need to provide intensive training how to run cooperative after we form them. My experience tells that we need to follow up regularly unless they can run their business independently. Thus, in Nepal one government agency is responsible to regulate them whether they maintain quality and standard and another goverment ageny and development project support them to qualify as the cooperative.«

This contribution has been coded in a similar way to example two. The entire contribution is first coded with the author's name. It is broken down into two statements: first the appreciative statement of thanking for someone else's contribution and the observable engagement with someone else's informal contribution that leads the observer to believe that this person has engaged in a seeking endeavour and, thus, in this instance takes that role. With »In Nepal, …« the second statement starts and this person is effectively »sharing knowledge, opinion, view, experience« (as in Example 1); however, since this sharing is in response to someone else's seeking behaviour the code for this section is »responding to asking for info«; this statement is coded with the role of »knowledge holder«. The final codes applied to this contribution relate to the social network analysis; author's name in »outgoing« and addressed person's name in »incoming«.

These three examples briefly illustrate how the various themes worked when applied to some data. However, contributions were not always straightforward to code. For example, themes four and five were applied to statements whenever appropriate. In the case of the »SNA« this meant that statements that showed signs of addressing a particular person were coded. Whenever these were entirely absent or when it was impossible (by observation) to determine who was being addressed, statements were not coded. In the case of »tone of statement« this meant that whenever the tone of a statement was clearly identifiable it was coded. In most cases this meant that when utterances included literal indicators about what the attitude of the speaker (tone) was then this was taken as sufficiently clear to justify coding. However, tones were also derived from statements without literal reference to someone's attitude; e.g. »*Greetings from Zambia !!! This is really a good way to start New Year!!! I am very much looking forward to be part of this learning alliance*« and »*this is great [person's name] & i can see that each one of us will never be the same again after this training and our communities will change for the better*« were coded as »excited«. Overall, there were 406 instances where the attitude of a speaker was clearly detectable to the researcher.

Additionally, when coding statements, particular attention needs to be paid to the following: In one contribution there could be two instances of the same sort (e.g. roles) separated by something else (e.g. holder-seeker-holder). This could be counted as two instances even though it is only one. The only thing that can be done to code these consistently is to have them overlap (holder running through seeker into holder). This will then turn up in the analysis as a contribution in which the author takes the position of a knowledge holder and a knowledge seeker.

Additionally, the distinction holder-seeker is sometimes difficult to maintain when looking at individual statements. Asking someone a question (knowledge seeker) might be (and is sometimes clearly) informed by previous statements (also knowledge seeker) and based on one's own knowledge (new information might be contextualised with existing knowledge). When this is communicated (observable/language as action) then this needs to be coded as knowledge holder. However, this is not always straightforward and sometimes the decisions are difficult due to the limits of observable intentions and cognitive processes.

Within the same case study (facilitator/funder initiated) the coding method was also applied to video and audio recordings. The analysis of the audio recordings followed the analysis of the online discussions. Themes for coding had already emerged and they were applied to the audio recordings as appropriate. Due to the meetings being of physical nature (some with a network moderator being connected via WebEx [a software for online meetings]) the impression was that the interactions were overall fairly unstructured. This led to the realisation that coding of the audio files was not possible in the way that the analysis of the online forum was conducted.

Thus, drawing on the mixed methods approach of this study, the researcher used the codes as guidance for qualitative analysis rather than a way of quantifying aspects of the phenomenon.

The data that this was applied to totaled 22 hours of recorded conversations that were captured in various facilitated spaces. The data represent a convenience sample of facilitated sessions and meetings. The convenience sample covered a variety of sessions from a weeklong study visit and the learning group meetings. Convenience sample, in this context, means that no other recordings were made available by the hosting institution.

With regards to the second case study coding was primarily applied to 13 email conversations. The way these were sampled were as follows: It was determined that a minimum of ten enquiries was needed for there to be sufficient conversations for a meaningful analysis, a time frame of four weeks was set in which a random sample of enquires (that engaged the triad of knowledge seeker, facilitator and knowledge holder) was taken. At 13 coded enquiries, no new codes had emerged for a while, which led to the conclusion that saturation point was reached.

In the analysis of communication (seen as behaviour) that occurred in email conversations the themes that had emerged in the coding of the online forum in the other case study were applied. This is in line with research objective (iii) and the fact that this research takes a *sequential* mixed methods approach. The intention was to test whether or not the scheme would be applicable in this context and lead to similarly rich insights (in the light of the research question) as with the online forum's analysis in the other case study.

After initial trials of coding and analysis it was concluded that the top level codes were applicable as before (1. People, 2. Purpose of statement, 3. Role, 4. SNA, 5. Tone). However at the second level a new coding scheme, emerging inductively from the data through reflection upon the research question, that was more appropriate for the analysis of the email conversations appeared necessary. Thus, the open coding procedure was applied for the codes at the second level to emerge.

Complementary qualitative data gathering and analysis

The processes outlined above and the coding scheme that emerged with regards to the demand initiated case study, were based on the email conversations. However, as with the other case study, the codes were loosely applied to some audio recordings of knowl-

edge exchange processes and interviews. These recordings were made in a face-to-face setting where the researcher (and an interpreter) observed facilitated knowledge exchanges. Two facilitated knowledge exchanges were observed at the community level, recorded and analysed, led by the research question and objectives, as well as the coding frameworks.

In this context the work done with the interpreter was important to the successful implementation of this method. The individual who was employed, after a lengthy selection process, had himself a background in the social sciences. This was important since the job of the interpreter did not just consist of translating *what* was being said but, more importantly, to convey to the researcher *how it was meant*; taking into account the cultural, social and political particularities of the context in which observations took place. In line with this, the interpreter was introduced thoroughly to the whole research project, the research questions and the methodology. Preparatory discussions took place, between researcher and interpreter, concerning to what we were trying to pay particular attention.

When observing groups (facilitated knowledge exchanges in a face-to-face context) the interpreter was observing communications and social processes; in those situations the researcher stepped back (did not ask for translations) and took notes on non-verbal cues and group dynamics that were observable without understanding what was being said. Immediately following the meeting the researcher then subjected the interpreter to a semi-structured interview; the interpreter responded to this based on notes that had been taken during the meeting and elaborated with additions from his short term memory. In this way, a rich picture emerged that not only illustrated what was said but also put this into the communicative and cultural context relevant to the situation that was being observed.

Social Network Analysis

The second method that explicitly enquired about the relationships between actors in the knowledge intermediation projects was social network analysis. It is well established that social network analysis is a valuable tool in the analysis of social structures (Wasserman/Faust 1994). The employed understanding of social structures, as already discussed above, »focuses attention on relationships between actors rather than on attributes of actors or their group membership« (Marsden/Lin 1982, S. 9). Social network analysis can focus on the relationships themselves and is, thus, a valuable tool for the assessment of the relationships found in the case studies under enquiry. Social network analysis was also of particular use with respect to the objective of mapping of relationships between knowledge holder(s), knowledge user(s) and facilitator(s).

Social network analysis attempts to expose the social relationships that bound human beings and groups together and how these relationships are structured. Additionally, it is argued that it enables enquiry into these structures and how the relations they describe impact on an individual's knowledge, behavior, beliefs, and attitudes. Relationships, in social network analysis as in network theory, are described as ties (or edges) and indivi-

duals as nodes (or vertices); node and tie are connected in the way individuals and relationships are (Prell 2012).

In this project a specific kind of social network analysis seemed appropriate. Since the case studies were approached without a hypothesis about which social structure might be encountered exploratory social network analysis was employed. As with open coding, the research process was of inductive nature; meaningful patterns emerged in the course of the analysis of the social network. Because of the absence of hypotheses (which would allow the researcher to focus on certain parts of a network) exploratory social network analysis underlines the need to study entire networks. However, this inherently leads to the question about where a network ends (Nooy et al. 2005).

In the cases studied, the boundaries are marked by the knowledge intermediation projects and their »membership«. The data necessary to conduct the analysis were gathered through observation and participant lists provided by staff members of the case study institutions. Every interaction amongst actors in the knowledge intervention was accounted for (in matrix spreadsheets). Richer (qualitative) data on the character of the ties existent in the case studies were already gathered by the other methods employed (Prell 2012).

One issue that needs explicit consideration is the comparison of networks. The mapping of the social networks analysed (knowledge interventions) should lead to a comparison of them. However, they are of different size and this can have a great impact on the value of the comparison; for example, measurements on density and degree can be biased due to these differences. Therefore, the social networks were not compared in terms of such quantitative indicators but the social networks were compared through their graphical representations/maps (and even these were interpreted with caution) (Prell 2012).

When considering another aspect of the networks analysed it became clear that in terms of their roles the actors fell, at the initiation stage, into three categories; knowledge holder, knowledge seeker, and facilitator (intermediary). In social network analysis this is described as a triad and specific modes for analysis and illustration of the relationships between them are available. One mode that is relevant to this study is the transitivity in triads. This measure can give insights into how dependent a network is on individual actors (nodes) for the maintenance of relationships (ties/arcs) (Prell 2012).

Even though there is benefit in analysing the triad pertinent in the case studies this would be an oversimplification of the situation. The role of knowledge seeker is not just attributed to one actor but to a variety of actors in both case studies; the same counts for knowledge holders. One further aspect, yet related to transitivity, that is analysed through network analysis is if actors with the same roles can be considered sub-groups. Generally, »a subgroup in a network refers to an area of a network larger than a dyad or triad yet smaller than an entire network« (Prell 2012, S. 151). Additionally, it was also interesting to see if the subgroups in the case studies are *cohesive* subgroups, something else that SNA emphasises.

As outlined above the data for the social network analysis were gathered manually in parallel with the coding procedure. The attempt was made to gather further data through

surveys regarding the social ties developed in facilitated spaces that were not based on textual communication. However, response rates were very low (e.g. 2 out of 9 in one of the learning groups) which made such analysis impossible. Utterances that showed indications of being part of a conversation between at least two individuals were coded with the »sender's« name and the »recipient's« name. Once completed, a matrix query was run in Nvivo10 that resulted in what is called an adjacency matrix. This adjacency matrix was then imported into UCINET 6 (Borgatti et al. 2002) for analysis and Gephi for graphical illustration.

The analysis of the case studies follows the ideas of SKAD and, therefore, the focus is on the interactions between individuals. However, what has not been addressed so far is the role people's thoughts play in knowledge intermediation projects and how those are related to the social structures involved in the case studies. Pragmatism and mixed methods research both aim at understanding the object of study as thoroughly as possible. In that context, interviews were employed to get an understanding of people's thoughts and perceptions, as well as their feelings, and attitudes towards each other and their relationships. This increased the researcher's understanding of the case studies, especially with regard to the roles people play. From a procedural perspective, the interviews were conducted towards the end of the case studies and, thus, also gave the researcher the opportunity to test the reliability of some of the preliminary findings that had emerged in the coding and social network analysis exercises. It was possible to see if participant's perceptions and priorities overlap with some of the researcher's results and reasons for similarities and differences were followed up.

4 Findings and discussion

The specific research question to be addressed by this study was »how can knowledge intermediation projects be monitored and evaluated with regard to the relationships they entail and facilitate?« To answer this question a defined methodology has been explored and discussed, and some reflections on the methodology are presented here. It was found in this study that knowledge-power is constantly present and that, by engaging in social processes, knowledge-power is constantly negotiated in south-south knowledge interventions. This is, however, an element that is not consciously dealt with in the two case studies and it is recommended that awareness of knowledge-power needs to increase especially when knowledge intermediation projects aim at facilitating the establishment and maintenance of (symmetric) relationships. If people with interest in facilitating knowledge processes are not conscious of the risks outlined by Flood (1999) and others then most likely, the status quo is (whether or not it is satisfactory) continuously re-constructed through discursive practices and other structuration processes ongoing in social spaces.

In the facilitated social spaces it was found that the institutionalisation of turn-taking practices needs particular attention. It was found that ways in which this practice takes place might lead to the structuring of conversations in forms that are preventative to pro-

cesses of knowledge co-creation. However, since institutionalisation is often unavoidable (especially when working with large donor organisations) different theories about knowledge creation processes should be considered. The information sciences offer many insights that can help improve upon current practice.

With regards to the applied methodology, the focus of this paper, a variety of insights and reflections can be drawn. In the following, some general reflections on the methodology, on coding processes, and on the particular case studies are offered. The overall impression was that despite some limitations and challenges the methodology led to an accurate description of the knowledge intermediation projects, and the relationships facilitated in the process. From the viewpoint of the researcher, the confidence about this being the case originates in the two levels of triangulation outlined in the methodology (see figure 2). It needs to be said that the methodology was developed with the research question in mind and, considering that, the aspects analysed in the two case studies would be different if other research methods had been chosen to address different research questions.

Most beneficial in bringing together the researcher's thoughts on knowledge, discursive practice, institutional structures, and power relationships was the sociology of knowledge approach to discourse analysis (SKAD) and any study attempting to link human interaction with institutional structures by looking at processes of structuration should consider this innovative approach to discourse analysis.

Challenges and future opportunities

However, the decentralised nature of the demand-led case study made minor changes to the methodology necessary (vis-à-vis the other case study). This makes it likely that modifications to the methodology are necessary when attempting a comparable enquiry on different knowledge intermediation initiatives.

Additionally, the analysis of the demand initiated case study, at the local level, would have benefited from speaking to some knowledge holders. Furthermore, more observation of the relationships between facilitators (in local knowledge hubs), community members (mostly knowledge seekers) and knowledge holders would have benefited the enquiry. Neither was possible due to organisational and financial challenges. It is therefore acknowledged that this has been an exploratory and inductive research project that has now established an area of enquiry and developed theories and insights that can serve as hypotheses for larger scale studies.

It is likely that the applied methodology, even when addressing some of the mentioned limitations, is unable to provide data for solid comparative analysis. As the complexity of the applied methodology illustrates, manifold factors influence interactions and processes of structuration in both case study contexts. Simplification, which necessarily comes with more deductive reasoning and quantitative analysis, will be necessary to achieve robust data for comparative analysis. Furthermore, it was intended to apply social network analysis across all facilitated spaces to illustrate the social structures that

emerged across these spaces. It was attempted to gather the necessary data with the help of surveys. However, the fact that a very high (close to 100 %) response rate is required for this approach to work made this impossible in practice. In retrospect, applying social network analysis to face-to-face scenarios makes it necessary that the researcher ensures that every relevant individual fills out the questionnaires.

Positionality

The focus of this paper warrants an explicit observation and reflection about the researcher's own role in conducting this research project. As has been outlined above the employed strategy to address the researcher's own influence on the research project was one of transparency and of seeing the engagement with the research context as an opportunity (for research impact) rather than an obstacle to (positivistic) objectivity.

Upon reflection, this strategy worked reasonably well. At the broadest level engaging with policy makers and development practitioners occurred without indications of adverse effects this research could have on stakeholders. In the online spaces the researcher was so marginalised (especially in the facilitator initiated case study merely one of the many non-participating members) that the impact on people and communications appeared to be minimal. Where more vulnerable groups (people further removed from experiencing international development) were engaged the outlined approach to working with the interpreter appeared appropriate.

It was observable how the dynamic of face to face meetings (that the interpreter and researcher were observing) was partially influenced by our presence. This occurred to different degrees in different meetings and communities. Especially one of the meetings we observed appeared staged. This led to disclaimers being used in the analysis of the findings. For example the following section:

> »As a note of caution, the facilitator seemed to be addressing the interpreter (eye contact) quite frequently; especially when emphasising that more support was needed for the participants to be able to enter a second phase of the tailoring training they were receiving. Despite the investigators having outlined various times that they had no affiliation with funding bodies or development NGOs and were there purely for research purposes the observed facilitated knowledge processes were clearly influenced by the presence of two external individuals (one white non-Nepali speaking foreigner and a ›professional‹ English speaking Nepali from Kathmandu). He [the facilitator] kept going on about the advanced training even though the participants had not really talked about it.«

It also led to preventing overreliance on data gathered through the pre-organised meetings. Whilst the research questions made it necessary to observe the facilitators in their engagement with communities the interpreter and researcher also engaged community members external to those processes. The picture that emerged from these data was dif-

ferent to some extent (depending on the community context) and enabled contextualisation and re-interpretation of other data and findings.

Impact of culture

The above hints at the role culture and social dynamics play in investigations of this kind. Another example for this relates to the analysis of relationships by interpretation of coding of tones (and other non-verbal communication that is crucial to human relationships). As mentioned above, great caution was applied when coding tone. It was mostly used when people claimed explicitly how they wanted to be received (e.g. »This is so exciting. ... «). In the culturally ›homogenous‹ spaces the researcher worked with a local interpreter (approach outlined above). In the online spaces, due to the nature of south-south knowledge exchanges, groups were culturally heterogenous (international groups, speaking mostly non-native languages [mainly English], using very technical language at times, etc.). It can be argued that, therefore, these spaces developed their own interpretations of tonation and atmostphere. In the analysis of the data this becomes evident. For example, in the seeker initiated case study (in the online spaces) the

> »top level code ›tone‹ was used 55 times when the attitude of authors was observable. People showed signs of being apologetic, ›Sorry for being so rude and not replying‹; appreciative, ›Wonderful and thank you!‹; curious, ›I have now come into another issue that you might be able to help me with‹; and hopeful, ›I hope it adequately address your queries‹. However, most conversations were short and to the point and it was often impossible to identify anything besides the technical character of the queries and their responses. This and the limited amount of other observable attitudes led to the perception that the conversations were mainly formal and technical.«

The methodology surfaced that the atmosphere and culture that was reflected in the tones of people's contributions was different across different spaces. This came through in the coding but was then triangulated by enquiring about participants' own perception of the matter in the interviews. The findings from coding and participants' own perceptions overlapped to a substantial degree.

5 Conclusions

This study developed an innovative mixed methods methodology that features participatory, quantitative and qualitative strands running alongside each other and including a set of interconnected methods that is in line with underpinning theory, approaches and research philosophy. This methodology allows monitoring relationship development and maintenance in spaces facilitated by knowledge intermediation projects whilst engaging relevant stakeholders in a constructive manner. When reviewing the methodology with

monitoring and evaluation practice in mind, it became evident that the analysis of discursive practices, acts of speech, and other forms of communication (e.g. non-verbal) is pivotal in any attempt to understand human relationship building and maintenance and the influence facilitated spaces might have on these. Thus, a confrontation with qualitative data is unavoidable. This has implications for any institution or individual undertaking such an endeavor; especially in terms of scalability. It has been found that case studies are very useful in this context since they allow for the exploration of interconnectedness between different processes and deliver the depth/detail of data needed to pursue such questions.

Due to the significant depth in understanding that the applied methodology adds, knowledge intermediation projects should consider integration of the methodology or aspects of the methodology in management processes undertaken in the delivery of knowledge intermediation projects and other endeavours that aim at facilitating knowledge processes. Monitoring and evaluation must not be seen as a separate undertaking to project delivery (even though this might lead to conflicts of interest). In such a scenario, where learning and improving programme delivery goes hand-in-hand with monitoring and evaluation (and upward/downward accountability) the usage of a methodology leaning towards analysis of qualitative data might be easier to justify.

Implementing the above can help establish more critical approaches and findings from within the international development community (driven by evaluators). Such practice could develop a body of evidence that shows at the level of citizens' lived experience what Akude, Hornidge, and Eyben are pointing towards at a more abstract level. Only when confronting the practical implications of our institutional constraints and procedural blind spots can we claim to put the interest of the people we are claiming to help first. This is not easy considering the vested interests at stake; however, the participatory strand of the research methodology has led to direct engagement between the researcher and individuals who are asking for tools and approaches that can help them do exactly this.

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Adress:
Professor Louise Cooke
Professor of Information & Knowledge Management
Head of Information Management Discipline Group
School of Business & Economics, Room BE 1.31a
Loughborough University
Loughborough LE11 3TU, UK
L.Cooke@lboro.ac.uk

Dr. Philipp Grunewald
Research Associate in Digital Humanities
Kings College
London, UK.
philipp.grunewald@kcl.ac.uk