Reflections on processes in and outcomes of

projects on networks in networks

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by

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The paper in question will give reflections on processes and outcomes of projects on networks in networks. The empirical base of the paper is the Netlog project at BI Norwegian school of Management, Oslo, Norway.

Introduction

Netlog is a project at the Norwegian School of Management BI, funded jointly in a consortium consisting of the Norwegian Research Council, seven companies and BI. The timeframe for the project is 2001-2005, and it includes six doctoral students with funding for four years and a group of experienced researchers directly involved or associated. Netlog is said to investigate "how companies can utilise and develop logistic resources in supply and distribution networks" (www.bi.no/netlog) and as such it has been positioned both in relation to previous and ongoing projects conducted in an IMP tradition, but also to a logistics setting and tradition. The main focus is how resources are combined and interact with other resources within specific companies as well as between companies in an industrial network. Six doctoral dissertations are one of the outcomes of the project, but also a database with a number of research cases according to a standard format will be produced.

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Purpose and expected contributions

Midway through the project, we, the PhD-students at the project, want to present the status so far. What has Netlog become and how does it comply with the original intentions? We see the Netlog project as representative of an IMP way of conducting research projects by allowing for researchers from different theoretical fields and institutions to work together. The doctoral students in Netlog are recruited from different disciplines, none with much previous experience from working with neither logistics nor industrial networks. Netlog also provides involved persons with a quite unique opportunity to work together with data collection and case writing in the same daily work setting. Hence, the idea of this paper is to explore differences and commonalities between us students, and how our interests may relate to the overall idea and content of Netlog. Each of the six dissertations centres on specific topics, illustrated by following key words: environmental identity [Andreas Brekke], supply strategy [Fahad Awaleh], learning [Lena Bygballe], participation [Ingunn Elvekrok], infrastructure [Carl Johan Hatteland] and package information [Per Engelseth]. These keywords will serve as focal points to which a discussion over individual interests and overall project will be framed.

The expected contribution of this paper is improved insight into processes involved in conducting a project within the IMP tradition by focusing the process itself as well as possible intended and unintended outcomes from the involved doctoral students' point of view. As such this paper contributes to elaborate on how and where we can expect to find the results of the Netlog project in future, that is, the results of bringing together six doctoral students from different theoretical fields.

Methods

Methodologically, the background and purpose of Netlog will be investigated by survey of documents and articles. Later, in a more elaborate version, we intend to interview the persons that were central in setting up the project. They will also be asked to explain the rational underlying selection of doctoral students with diverse backgrounds and what they believe is likely to be the outcome of Netlog. These interviews will form the basis for a model illustrating the rationale of the project. Further, each of the doctoral students will be responsible for providing a description of their dissertation work.

Outline

In this paper we will start by looking at the foundations of Netlog and how it came into being. We will also draw attention to the context of Netlog in terms of how Netlog is related to a set of research projects, as well as to its more empirical context. Next, each dissertation topic will be presented as a case indicating a primary research driver or interest for the author. These cases/keywords provide the basis for the discussion as to how Netlog is and is likely to be influenced by the PhD-students, and how the PhD-students are and are likely to be influenced by Netlog. Finally, we will discuss how Netlog may contribute to the further understanding of industrial networks, logistics, and possibly other fields of theoretical inquiry to which individual dissertations may relate.

The Netlog project

The project was initiated to increase future recruitment of faculty in logistics at BI. Through meetings between logisticians at BI lead by Marianne Jahre, academics from outside BI, people from industry, and Håkan Håkansson a research proposal was formulated. The proposal focused on the concept "the new economy" and the abbreviation ICT. In more formal and scientific terms the background and the aim of the project sounded like this:

> "The background of the project is the ongoing re-organisation of industrial activities, particularly originating from developments in information technology and increasing attention to customized offerings. These developments challenge prevailing logistic structures...we want to study three applications – the first concerns new technological solutions with regard to different logistics problems. The second concerns the consequences of new organisational forms (inclusive new logistic actors). The third concerns innovation in relation to the environment, for example efficient packaging and transport solutions with the use of IT… In the project research competence from systems thinking is combined with competence on industrial networks. Through this coupling, the project will contribute in the understanding of the tensions between new technology and existing structures." (Jahre et al. 2001)

It did not take long, however, before the focus of the project shifted away from ICT and "the new economy". Whether this happened because none of the appointed PhD-students showed

any interest in the subjects, or because the senior staff had other scientific puppies to nurse, or because the words were only included to "sell" the project in the first place, is hard to say.

At the practical level the project started to identify, and still identifies, logistic dimensions in various resources. Such dimensions can be found all over, but Netlog applies a format in the data collection taken from Håkansson & Waluszewski (2002) where resources can be organisational (business units and business relationships) or technical (facilities and products). Researchers in cooperation with companies identify a focal resource that a case shall illustrate, where the focal resource is analysed in terms of how it interfaces with all four resource categories. The main body of cases are written after common data gatherings, so called 'flying squads'. These sessions have been undertaken almost twice a year. All the people in the project, and even additional researchers, have joined and formed groups of 2-4 people that have went to different companies. The groups contain experienced as well as less experienced researchers, often with a background in different disciplines. A database consisting of such cases is one of the outcomes of Netlog. Most of these cases are concerning resources in relation to the companies that are partly financing the project. The companies are thus creating the empirical context for the project, and makes empirical data available to the doctoral students. Crudely stated, it is possible to see the project as an empirical contribution to the industrial network approach and a theoretical contribution to logistics.

More or less formally the Netlog project is coupled to other projects producing doctoral candidates. Within a short physical distance, actually on the same floor in the same block, PhD-students from the projects Newmark and D-net have their working place. The first one is looking at the coupling between consumer marketing and industrial networks whereas the second is concerned with distribution networks. They are run by Håkan Håkansson and Gøran Persson, respectively; two of the senior staff involved in the Netlog project. Another member of the senior staff, Lars-Erik Gadde, has his daily office at Chalmers in Sweden where he is head of a project called Lognet. As the name implies, although situated further away geographically, the project is even closer related to Netlog. These related projects give the Netlog project an opportunity to discuss and test their findings. For the doctoral students it means an even larger network that can be employed in order to present and get feedback on their work.

It is possible to view the Netlog project from many angles and understand it as aiming at different goals. So far we have seen at least six different views of the project:

- As a case database
- As a recruitment strategy for logistics
- As relationships between BI and Norwegian companies
- As a means to expand empirical areas in industrial networks by focusing on logistics
- As a means to expand logistics theory by bringing in concepts from the industrial network approach
- As a meeting place for scientists and other experts.

Before we discuss the Netlog project in relation to these six different views, we will turn to the specific work of each of the PhD-students. Our backgrounds and research interests will also be used as input to the discussion.

Background of the six Ph.D. students

The six doctoral students involved in the Netlog project come from a variety of different fields and institutions. Fahad Awaleh is educated at the Norwegian School of Management BI, with specialisation in logistics and strategy. Andreas Brekke is a chemical engineer from the University of Trondheim NTNU. He has earlier worked with environmental assessment methods. Both Lena Bygballe and Carl Johan Hatteland are educated at the Institute of Educational research at the University of Oslo, with specialisation in didactics and in educational economics respectively. Ingunn Elvekrok is educated at the Norwegian School of Economics and Business Administration (NHH), with specialisation in organisation and leadership. She has earlier worked with marketing management, organisational development and tourism. The last of the students Per Engelseth is educated at the College of Buskerud and has for several years been lecturing in marketing and logistics.

The dissertations

Each of the six dissertations centres on specific topics, illustrated by following key words: supply strategy [Fahad Awaleh], environmental identity [Andreas Brekke], learning [Lena Bygballe], participation [Ingunn Elvekrok], package information [Per Engelseth] and

infrastructure [Carl Johan Hatteland]. In the following a brief description of the dissertations will be given.

Fahad Awaleh: ”How to utilise a supplier as a resource”.

In the literature much attention is paid to how firms position themselves and interact in the supply network. The implications of globalisation and consolidations of markets and the fact that firms are constantly seeking cost reductions have lead to a strong focus on firms to nurture a few core competencies. However, firms need to interact with counterparts so to add value to their own core processes, and due to the interdependencies that exist between firms in the supply chain, they will have to seek ways to improve coordination of activities, and utilisation of resources located outside the focal firm boundaries. My doctoral project investigates how firms in the supply network utilise resources owned and controlled by a counterpart – whether it is a supplier, customer, or a competitor. The focus is on how collaborative business relationships, where the parties either share firm specific resources, or develop new resources between them, are established, developed and managed throughout the process. The central concepts are resource development, business relationships, and positioning, and the aim is to see how strategy (e.g. firm strategy, supply strategy, supplier strategy) relates to and affects or is affected by the specific collaborative business relationship. Empirically the project is based on a case study of one of the companies involved in the Netlog project. The interest in the topic was evoked during the work with the above-mentioned company both during my master thesis and the Netlog cases.

Andreas Brekke: ”Interacting for the Benefit of the Environment. *Interaction and Environmental Concerns in the Automotive Industry”*

What are the reasons why some companies are willing to undertake environmentally friendlier actions? To understand how environment is taken into account I have chosen in this project to use the concept ‘environmental identity’ which is coupled both to how the members of an organisation see the organisation and the vision and goals stated by management. The companies bring their environmental identities into the relationship where they are utilised and developed. Feedback from the relationship to the involved organisations should eventually lead to changes in their respective environmental performance and it is this relation that will be scrutinised in the project. The automotive industry is the empirical setting. Cars are some of the bigger polluters in the World, but still car manufacturers use enhanced environmental performance as an argument in their marketing. In order to produce

environmentally friendlier cars, the manufacturers need to take advantage of their suppliers' abilities, and the focus in my thesis will be on a relationship between a manufacturer and one of its suppliers as a resource. The interest in this topic was evoked when I was working with environmental assessment tools earlier. I was puzzled by the slow integration of environmental issues in business life. I was taking part in developing ever more sophisticated evaluation methods of environmental impacts, but experienced that companies were asking for the opposite. They were not too concerned with the accuracy of measurement and the more philosophical discussions around the relative damage of environmental impacts. Instead they wanted simpler tools that could allow them to show their excellent environmental performance in a minimal amount of time. Then I was asked to be a part of Netlog and write a thesis of my own wishes as long as I included ideas relevant to logistics and industrial networks.

Lena Bygballe: "What is learning in customer-supplier relationship?"

Researchers in the fields of organisation theory and industrial networks have long recognised learning as a central phenomenon in business to business relationships. Much of the research on inter-organisational learning emphasises formal relationships with deliberate learning goals. However, knowledge and learning are highly involved in the daily practices between firms and may contribute just as much to knowledge development as more formal co-operations. According to Håkansson et al. (1999) learning in existing relationships between customers and suppliers is as yet rather unspecified in the literature. My doctoral project aims at describing and understanding learning in regular customer-supplier relationships. The project draws from the organisational learning literature and research within the industrial network approach, centring on three concepts and the relationship between them: Learning, Routines and Resource interfaces. Empirically the project is based on a case study of one of the companies involved in the Netlog project and three of its supplier relationships. The idea of the project stems from an interest in learning in general, based on my background within educational science. Being part of the Netlog group and consequently introduced to the industrial network approach, encouraged me to study inter-organisational learning. At the time I was applying to the project I was working with a project about ICT-based learning. Hence, the topic of my original research proposal, centred on ICT-based learning in higher education, has changed tremendously since I first started in Netlog.

Ingunn Elvekrok: ” Participation in change projects”

As in many other areas of organisational behavior, the involvement of employees has become accepted as a sound practice in formulation and implementation of strategic change. Participation research typically lacks precise definition and operationalisation of the construct, and the empirical findings on effects of participation are largely inconclusive. This fact reveals the often unrecognized complexity of participation, both as a theoretical construct and an empirical phenomenon. One explanation of the difficulties in reaching conclusive results concerning effects of participation is the existence and use of different forms of participation (Cotton et al ,1988, 1990; Leana et al, 1990). Another explanation is the many definitions of the concept used by different researchers. The object of my study is to examine the effect of different participation forms on important factors associated with success in strategic change, as well as the effects of increasing the specificity of the participation construct on explanation power. The empirical data has been collected from Nordvest Forum AS; a learning network owned by 50 companies located in the north-western part of Norway. Unit of analysis is strategic change projects conducted in their companies. I’ve always been fascinated by how people respond to change in different ways, and I truly believe that proper management of HR (which does not equal participation), is the key to successful leadership. My doctoral work had already started when I first took part in Netlog. Working within the project have enhanced my understanding of the emergent character of processes as well as the embedded nature of change projects, and this has affected the thesis.

Per Engelseth: ”The Package as an information resource in a logistics network”:

Packaging represents a core logistical resource in relation to materials flow and storage activities. To manage and operate materials such activities actors depend on information from an information flow. These activities take place in the context of a logistics network that varies in relation to the operational characteristics represented by lead-time, uncertainty and variation, frequency and expected demand patterns. These characteristics of a logistics network are understood as influencing the nature of packages role as an information resource. My doctoral study focuses on the nature of the packages role as an information resource. The study aims at contributing to an understanding of how transformed resources, packaged products and information, represent a binding element in logistics networks. Empirically, data is collected within the food-products industry, mainly in the context of the logistics network

of TINE and BAMA. Both these firms are participants in the Netlog project. BAMA is a fresh fruits and vegetables distributor with a 50% market share in Norway while TINE is producer-owned dairy products supplier and distributor. My interest in the research theme was evoked through my work with the Netlog cases, when I was appointed to work with the above-mentioned companies.

Carl Johan Hatteland: ”Configuration of Port Infrastructure. ***A Discourse on the Distinction Between Physical and Knowledge Infrastructure”***

Typically interpreted as "the complex of non-natural resources that are collectively used by industry in the production and distribution of products” (Smith 1997:90), economic infrastructure is often thought of as including services rendered by and from public utilities, public works and other transport sectors. (World Bank 1994:2) The academic debate concerning infrastructure has focused on aspects of public goods in infrastructure that can justify market intervention and regulation. Increasingly the focus has shifted to roles private actors play in the provision of infrastructure, the central issue being whether and under what conditions sufficient infrastructure can be provided in a market. Implications of this debate can be seen as previously regulated and/or publicly provided activities and resources are unbundled, deregulated and privatised. My doctoral study seeks to enter this debate from an industrial networks perspective, using ports as an empirical setting. Focus is placed on patterns of how collectively used resources are given their economic features through the variety of uses the type of resource allows for simultaneously. The central issue concerns under what circumstances, why and how in industrial networks some resources are given features as suggested by the notion of infrastructure, and how such resources are required governed in order to maintain and develop their status. The notion of ports as nodes in networks is adopted to make a distinction from ports seen as infrastructure. Two practical questions guide the approach: What is a port node? And, how does it develop? The interest in this topic stems primarily from studies in economics of education, and ports in the production of goods are here used as a physical equivalent to universities in the production of knowledge.

Discussion and conclusion

Netlog can be seen in various ways. Netlog certainly may be seen as a database of case studies in a particular format, and a group of researchers circling around the feeding ground. As individual researchers close up and engage for a feast the qualities and the quantities of the meal get clearer. Secondly, it may be seen as a recruitment instrument to a logistics teaching and research environment. How would a future department of logistics based on the topics and interests of PhD students look like in terms of teaching and research activity? Netlog may also be seen as a collection of relationships to companies, both in terms of establishing and adding new relationships to a relationship pool, and in terms of providing content and maintain mutual orientation in existing relationships through research and case activity. Fourthly, focusing on logistical dimensions of resources may instrumentally embed logistics within industrial networks research. By taking up and adapt to language, methodology, research orientation, and most importantly, by looking at logistics actors as having and facilitating business relationships, logistics may scion itself as a branch on the industrial networks tree. Such a symbiosis will hardly be successful in the longer term, however, unless dependencies and contributions are mutual, therefore, using a logistics environment and setting as a step-stone may create an extension in terms of audience to and use of industrial networks as a research approach. Finally, Netlog may be seen as an instrument that provides different research disciplines with another arena where mutual exchange can take place, a banner under which various groups may gather to reach out to or face fertile groups, or as 'neutral grounds' where 'friendly' internal fights can be fought in order to reach an agreement of how to relate.

Netlog cases serve not only in terms of case outcome, but most of all through making researchers work together and to create a base upon which to create a shared understanding of an empirical setting. The case outcome is then used for purposes of each individual researcher or group of such. Bananas and strawberries become packaging information, a call centre becomes inter-organisational learning, a dairy terminal becomes network participation, etc. Netlog as such create a setting making communication over disciplinary boundaries possible. The varied backgrounds of PhD students is bridged by an empirical setting and actual cooperation that create a group that shares a logistics- and industrial networks identity, but that may still see themselves as primarily engineers, economists, pedagogues, marketeers, strategists, etc. Netlog as a case collection serve as the soil out of which there may turn out to grow no strong tree, but where branches may thrive together and commonalities despite

differences are focused. It is questionable to what extent a collective momentum for theory development can be built over such a platform, however.

Netlog was set up among other things to recruit faculty to logistics. Few of the six PhD students would see themselves as eligible for PhD studies in logistics based on initial interests and background prior to starting. If aiming at recruiting people to teach and do research in the field as is, perhaps a more narrow and pointed selection of students would serve this objective better. On the other hand, if aiming, as Netlog, to make an impact on what research in the field of logistics is and should be, and to make a 'welded joint' between research disciplines and approaches, the variety would serve better. To what extent the latter proves better in terms of how it is judged by history, however, is not obvious.

Netlog is a practical attempt to also merge two strong sides of two research environments, logistics and industrial marketing. Whereas industrial networks have been used to set up projects that attempt to draw attention from industry still keeping its analytical focus, logistics have had a strong base in relationships to industry and companies. Seven companies signed up for a five-year cooperation contract on a logistic project based on its previous relations to the logistics environment. These relationships, through the varied background of PhD students, are now being extended to include issues such as learning, environment, infrastructure, strategy, and packaging information under the Netlog heading *logistics in networks*. This means that if one aims at studying organisational learning or environmental identity, logistics could be a good starting point whereas these issues would be at the fringes of what would be studies within logistics before.

Networks have been predominantly concerned with production and interaction between producers in marketing contexts. Industrial networks could, admittedly unfavourably, be described as being about buying and selling, and coordination of buying and selling related behaviour through relationships rather than markets. Services, as logistics is mostly about, have been sidelined at best. Logistics is a setting that may provide industrial networks with a way to include a stronger focus on service activities attached to production activities. Where, for example, are services rendered by public utilities such as universities or ports or roads in industrial networks? How is legislative measures dealt with as shaping industrial networks? Are the intangibles a residual somewhere in between claimed tangible network positions, identities and relationships?

Logistics, on the other hand, have had sparsely with theory to approach the phenomenon of logistics itself. Logistics activities being what is perceived to take place in between clearly defined entities, the firm, the channel, the chain, etc. Logistics have been concerned with the minimisation of itself subject to constraints given by a defined environment. Within industrial networks logistics take on a supply side as well as being in demand. Logistics take part in the construction of the network rather than filling gaps of activity as ownership to label is shifted. An industrial networks pulverisation of any 'reality' serves to open a window of opportunity to fill the logistics activity gaps with an industrial substance rather than being viewed as costly quagmires. Perhaps this is the logistics mission, if not contribution, of Netlog.

At last, Netlog, as many other projects, can be seen as an instrumental excuse created so that people with different backgrounds coming from different institutions and projects can meet. Academic activity rests not only on the individual researcher. Scholars need to meet face to face. Netlog can be seen as one address for where to meet. As a direct result of Netlog a PhD course was created where students from various institutions and projects turned up. Various seminars give rise to also social exchange between scholars, between scholars and industry, and between people from industry.

In summary, we have argued and attempted to illustrate that a project, like Netlog, can be seen in various ways, contributing to various ends. A particular feature of Netlog is the variety of the PhD students selected to take part in it. We have tried to point to consequences of this variety on the different ways of seeing the project.

An interesting question concerns where to find the remains of Netlog in yet another five years. Will it be in logistics, in industrial networks, or will the students take their individual perceptions and interpretations of Netlog back into the fields from where they came?