Models for Research Leadership as Entrepreneurial Organising for Research

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Abstract

The paper discusses research leadership in public universities under change and the role of entrepreneurial strategies in research. Research leadership function today in situations where the New Public Management movement one the one hand have introduced management by accountability and control in the university while on the other hand open boundaries to other knowledge organizations, arenas and networks, and creation of resources are becoming more important than ever. Hence, an entrepreneurial strategy is more important than traditional managerial skills in order to produce new knowledge centres. By analyzing three cases on the construction of new research groups, we will introduce new perspectives on research leadership, where dilemmas, uncertainty and complex relations to other managerial systems in the universities are in the forefront. The paper presents an important contribution to the understanding of a organizing by networks in a special form of creating new knowledge production in the university be means of organizational entrepreneurship.

Keywords:

Organizational entrepreneurship, research leadership, universities, knowledge management, networking.

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1. Introduction

In Denmark, as in most Western countries, the frameworks for research has been challenged in recent years, both by limited public resources for universities, and by new structures distributing resources on the basis of competition for external state research funds, different strategic research foundations and EU-funding agencies. A new governance systems in universities and the upcoming of new research accountability systems stresses the productivity of the researcher and together with limited research resources for universities and the pressures of mass education we have a situation in most science fields, where strategies for forming and organising research has to be reinvented. The growing role of external funding and short term contracts underscores the need for new strategies for creating space for research in universities.

On this background, this article analyzes cases and narratives of research entrepreneurship, the creation of new research centres, and the emergence of new research fields. Cases from two universities tell the story of how new research is created on the boundary of disciplines and stories on networking and construction of relations in research. Together these stories are about entrepreneurs, networking and paving the way for new research. The curiosity, engagement, and passion of the entrepreneurs in the research organisation create new networks and emerging structures for new opportunities of research. We have interviewed a number of researchentrepreneurs in order to present the cases in the paper.

The analysis covers the opening of new research perspectives, the emergence of new forms of networking and organising, and the initiation of new types of collaboration with both industry and public sector institutions, in a national framework. To rely on the classical management perspective would only cover a very limited part of the process, as creativity and entrepreneurship are fundamental variables for understanding the development of new research fields and both variables has been shown difficult to handle by the traditional and linear management theory.

Researching entrepreneurial organizing in research is part of a larger study of new foundations for research leadership. It is based on detailed studies of the practices and strategies in a field following the trail of critical incidents. The project contributes new knowledge about the role of research leadership by focussing on leadership in action and the role of strategy, through the

attempt to form new research platforms and resources. The emphasis on the relevance and application of research in state and industry not only creates a new market for research dissemination, but also a new source of research cases and funding. Academic entrepreneurs in these organisations create networks and mobilize resources outside the organisation. By manoeuvring in the existing bureaucracies for internal resources, they appear to be deploying a strategy of combining different principles for organising. We analyse how researchers develop resources and become research leaders by generating human resources and access to data, and due to creation of more research time, they also make it possible to fulfil the classic university success criteria of scientific publications.

2. New context for entrepreneurship

New entrepreneurial strategies have emerged to combine external and internal resources in the effort to construct and expand new research fields. An understanding of the role of entrepreneurial leadership among leading researchers is therefore increasingly relevant to our understanding of the field of research leadership, where organisational entrepreneurship and creation of networks thrive on asymmetric knowledge (West 2003, Johannisson & Mønsted 1997, Johannisson 1998). The general context has changed, and the ability to organise in this new context has become the ability to engage a highly entrepreneurial activity.

A new framework for entrepreneurial action among researchers has emerged and can be summarized as follows.

- The entrepreneurial researchers apply for large projects in order to win resources to cover the costs of PhD students, postdocs, administration, travel and conferences participation. In this way a research group or centre is established as a basis for further research, and for a change in the research profile of the involved parties. The action of organising is a condition for understanding the dynamics of research, and for understanding the allocation of resources, trying to create space for research by buying time from teaching and administration.
- Most European funding is tied to collaborative networks of researchers that cross both
 national borders and the boundaries between universities and firms. Funding institutions
 encourage forms of networking and organising that run parallel to existing university
 structures of disciplines and departments and sometimes even compete with them. The

- demand for co-funding in international and national research schemes challenges the traditional university structure.
- There is a much stronger emphasis on applied research, i.e., research that is relevant for state and industry and often co-funded by industry or public organisations. The types of collaborations in this area are developing, and open up for a discussion of the role of dissemination of research, both as a criterion of relevance, but also as access to do relevant research. Dissemination demands increase the pressure to publish in local languages.
- The classic performance criteria of publishing, which have been different in different disciplines, are getting increasingly standardized for international reviewed journals, even if the social science tradition has had a broader set of criteria for quality in publishing focusing more on books.

In combination these conditions together with the existing 'rule of the game' in the university create a complete new context where new ideas and initiatives can be formed in networks and the networks used to mobilize funding agencies, as well as private and public organisations. More than ever it is considered a positive feature of a research program to have strong ties to industry and to get external funding. Academic entrepreneurs of the 21st century are those who have the ability to manoeuvre both externally in collaboration with firms and public organisations, as well as internally to integrate initiatives with permanent positions. Doing so, they create new opportunities for research and research centres. The ability to create these opportunities becomes one of the most important leadership competences of research leaders. The focus is shifting even in social science from individual social scientists to team-based research groups and this call for collaboration in networks across boundaries. The change in conditions open up possibilities to create other forms of organising than traditional disciplinary groups and departments, where temporary and cross disciplinary forms create new opportunities in new combinations of disciplines and practice.

3. Theoretical perspectives

New research fields in institutions are developed by organizational entrepreneurs, who see a potential and generate resources for a new field. Taking seriously the arguments for changes in research toward more collective organizations and trans- or cross disciplinary work (Nowotny et al. 2001), we argue that these problems cannot be analyzed from the perspective of

traditional management theory, but need to be approached from other central discourses; 1)organizational entrepreneurship, and 2) network theory and social capital. Our goal is to present a convincing set of cases of the new conditions for constructing research organizations and acting as research leaders, and thus set the stage for new theoretical frameworks for analyzing leadership as it grows up and develops in the university.

In research leadership, we focus on two aspects, highlighted in studies of knowledge companies: the role of networks and brokerage (Burt 1997, 2005) and thus the role of social capital (Bourdieu 1981, 1998) and organizational entrepreneurship (Hjorth 2003). In the knowledge organization, working with temporary organizational structures, rapid organizational changes and networks are some of the characteristics of a new kind of organizational entrepreneur. (S)he is working in and between internal and external networks, and on very short-lived networks as well as long-lasting ones. In addition, if we combine the idea of networking entrepreneurship with Burt's (1992, 2005) discussion of structural holes and brokerage, where the broker sees 'entrepreneurial opportunities' in the structural holes in the networks and profits from establishing bridges (Burt 1992, 36), we have a tool for understanding how the new type of research leaders operate. Acting as entrepreneurs or brokers, placing themselves in (or on) bridges in networks, they guide the coordination between networks across structural holes. The structural holes are many and various in the modern university, some related to the institution, some to the international scientific networks and some to the outside world, industry or other user institutions, or to society as a whole. Especially the networks to stakeholders are closely related to the new demands to universities to produce social robust knowledge in interaction with society and stakeholders (Nowotny et al. 2001).

The ability to locate structural holes and brokerage opportunities to supplement the internal closure in social networks thus is one of the central qualities in the research leader, as alliances and contacts have to be built in order to create a new space for research in an organisation mainly structured for and based on teaching. The capacity to manage networks demands the ability to persuade followers and build up a group around oneself. In order to do so the research leader seems to depend on the ability to have a clear scientific credibility and status. It could be what Bourdieu (1998) defines as a special case of social capital, namely, scientific capital constructed by scientific reputation and the power to mobilize resources to research in order to attract followers. The sheer recognition of scientific capital is still not enough, however. We focus on how core members of the larger organization regard the group in the beginning as

outsiders, but are persuaded by networking and the created new structures; i.e. how new groups manoeuvre by changing the way of organizing?

The combination of external networking across structural holes and internal identity and the deployment of effective norms and trust in a culture of communication may be seen in university and research teams in other studies (Salancik & Pfeffer 1977, Coleman 1988). The former CEO Fourtou of Rhône-Poulenc argues that "his scientists were stimulated to their best ideas by people outside their own discipline" (Burt 2005,60). Fourtou emphasized *le vide*-that is, emptiness and nothingness, an open space--as having a huge function in organizations. This is an empirical experience to the theoretical part of what Merton keep calling serendipity and the unexpected moment in research. (Merton 1968, 159).

As stated in the beginning the research question relates to the oscillation between organizing research, traditional managerial tasks and tasks formulated in collaboration with industry and society as such. We have tried to conceptualize this dilemma by introducing the concepts of entrepreneurial leadership and social capital in knowledge organizations representing a university. For our empirical study the use of these concepts with a strong focus on the networking dimensions should help to frame the questions about larger organizations regarding groups gradually creating new legitimacy.

In open and complex organizations, power cannot be understood solely in terms of mastering formal organizations by managerial techniques. Instead we might need to look back and reintroduce Max Weber's famous discussions of charismatic leadership. Here part of the scientific capital or status in the science community "rest[s] on devotion to the exceptional sanctity, heroism or exemplary character of an individual person, and of the normative patterns or order revealed or ordained by him" (Weber 1964/1947, p. 328). Power is exercised by special personal qualities, by charisma, as opposed to rational, bureaucratic and traditional forms of power. Clark (2006) provides us with a historical study of the possibilities of operating in networks in the structure of the university and how to avoid too much collegial disciplining and bureaucratic regulation. The power base for university departments is analysed by Salancik and Pfeffer (1977), showing that the ability to generate external funding seems to be the most important power dimension for generating internal legitimacy and resources. Weber's concept of charisma can contribute to explaining how the research leader operates in order to attract followers, but at the same time the research leader in the modern university cannot avoid operating in and with the managerial world in the university, defined by obligations toward teaching and administration. Power, on this view, is generated in interaction and dialogue, in

how the role of the entrepreneurial research leader will develop over a number of years. How will institutional and bureaucratic pressures influence the entrepreneurial spirit and the role of networking in the university? How are the entrepreneurial research leaders using the bureaucracy to generate resources? In order to address such issues, the concept of organizational entrepreneurship in the university has to be developed. The point of departure is the decreasing and limited time and other resources for research. Research is therefore a field that is not just managed but enacted and created in an entrepreneurial way.

4. The case stories at CBS

There are major differences between classic universities, most business schools and the Copenhagen Business School that stem from the early 1990s. CBS differs from most universities in being a monofaculty (since 2007) institution and the non-disciplinary and problem oriented approach to teaching and research. It differs from most business schools by its integration of social science and humanities together with more traditional business economics. The framework for research management is a university business school with teaching at the bachelor, master of science, PhD, and executive master programmes, and diplomas as evening programmes, and with part time research as a right and obligation for the tenured staff. Even if the emphasis is on issues related to application and dissemination of research, the classic performance criteria from universities remain the same.

The management structure in the Copenhagen Business School is basically organized in a matrix structure, where the head of department is responsible for research, for administration and for supplying teaching to different studies. The head of department is also responsible for the staff to fulfil these obligations. The study directors on the other hand are responsible for the studies, and may choose to recruit external part-time teachers, if the departments cannot provide tenured teachers with the right qualifications, or they want a cheaper recruitment of teachers for the undergraduate programmes. The study programmes all include input from different departments and disciplines, such as marketing, accounting, organisation theory etc.

CBS undertook its first major research evaluation in the early 1990s, which paved the way for new mergers of groups from other departments into a new department (Foss Hansen and Borum 2000). This led to setting up department research evaluations from a bottom up perspective, i.e.,

in way that involved the local research groups and researchers in the formulation of the problems and agenda of the evaluations. The bottom up process showed its strengths especially in local discussions, where a stronger ownership position in the research environments could be secured. In short, the evaluation of a single large and heterogeneous department managed to articulate the problems at the whole business school in some very constructive ways, preparing the institution for future discussions about the reconstruction of this department into what would become the department of Management, Politics and Philosophy. A later survey also showed that members of this department experienced the greatest satisfaction with the whole evaluation process at CBS. The new department was established in 1995 as a merger between a number of smaller groups and the department of management and strategy. The head of the department at the time, Professor P.O. Berg, motivated and mobilised the groups involved to form the new department on the basis of the earlier small management department, and managed to get support from the president and dean to establish a number of new positions to support the process. The group of philosophers already employed by CBS moved to this new department. They had been involved mainly in methodology and philosophy of science courses. A group of political scientists came from an existing cross university research centre (COS), where some went to other universities, and a few positions were established to recruit a core of three researchers. The centre for innovation and Entrepreneurship became part of the new department as well. The business historians joined the department in 1999.

The general purpose of the department is to develop research and teaching in the fields of management (including strategy and innovation), politics and philosophy. The idea was to build up research from different disciplines, where all are related to leadership and management. An interesting challenge consisted in getting disciplines such as philosophy, political science, and later history to contribute to a business school perspective on management. The story of growth emerges from the social construction of legitimacy, the development of a space of opportunities waiting for initiatives, and the underlying entrepreneurial culture of the whole school. The merging of a number of groups to form a new department was not done only as a top-down process, but an effort to build up a platform of mutual understanding, where the responsibility for the younger staff was stimulated, and where researchers perceived the growth of the department itself as an interesting challenge.

The reason for telling this detailed story is to create a context for entrepreneurial action, and the role of the different elements of strategy to create space for research, such as the effort to get

external funding and develop new teaching programmes, which was not a dominant feature of the culture at that time played an important part in the story to create growth. A huge effort was invested in applying for external funding and means to develop educational programmes. Several people were involved in this effort and a number of important research grants were won to sustain growth. Likewise, the masters' programme in knowledge management, the combined philosophy and business economic bachelor education and the later new master of social science have been a collective effort to leverage the new educational profile that the presence of philosophy and political science at a business school implied.

In reconstructing this story, the role of leadership became very clear. It is to stimulate initiatives and allocate resources, but it is also increasingly to organise the framework and establish the conditions for institutional change. This organization of background conditions, in fact, becomes more important than managing existing resources.

The process of constructing a research group takes a number of different routes, some depending on the discipline and traditions in the research community and some related to the specific themes in a research-organizational context. Basic questions to be solved in setting up a new research unit independent of discipline and institution include how to define or set up the agenda, how to recruit, how to select key personnel, and how to secure funding. Taking a longer view, there is also the question of how to transform the group from an up-and-coming initiative on the boundary of mainstream research to a stable and influential part of the whole organization on a more permanent basis. The following section will discuss our case story with an eye to how the two research groups were set up and how they grew into what has become a more stable situation.

In the cases discussed here, the two research groups in focus have some important common features but also some marked differences in their history. The common feature relates to the role of participating in teaching programmes in the mother institution, i.e., CBS. The differences relate mainly to two aspects of the group construction: the role of the disciplinary system in (social) science and the construction of the leadership roles in the group. They are showing some of the challenges of using the discipline in practice with external organisations.

Seen in relation to the disciplinary structure of a traditional business school, both research groups were living on the edge. That is, their major research questions and disciplinary core was and still are on the boundary of what is conventionally understood as related to business economics and relevant to a business school perspective. Both groups faced the same

basic problems related to establishing space and recognition inside the organization in order to survive and expand. In some aspects they chose the same strategy but in others they chose very different ways of expanding and establishing the internal coherence of the group.

During the interviews, both researchers who are now group leaders stressed that the combined focus on external resources and teaching as a fundamental strategy in setting up a new research group in interdisciplinary spaces. Teaching is of course one way to win resources for the group, but it is also, and more importantly, a way of gaining legitimacy for the group's research activities in the eyes of other parts of the school and in due time incorporate the group in the university. The bureaucracy is both a constraint and an opportunity to mobilize resources and legitimacy in the existing structures. The disciplines in both groups are marginal to the Business School, and both have to find other means to become central actors, and move from marginal to core positions.

4.1. The Policy group

The group established itself over a period of seven years with a well-defined profile in public policy and public management analysis both in research and in teaching. Over the last four years, the group has developed collaborations with organisations and institutions and made room for externally funded research projects on the boundary between private and public policy, especially the role of NGOs. This process has led to spin-off successes in both the teaching and the research profiles for the whole group.

The leader of the policy group, who was a young associate professor in 1995, stated the basic strategy of using teaching opportunities to build a new group this way:

You participate in constructing your audience by setting up new expectations for teaching in management and organization by asking how to make myself relevant. We started by producing a number of electives and in this way it slowly developed into new expectations among students. It is a long struggle over many years to produce a teaching strategy...

The group chose a strategy explicitly aimed at getting a large share or portfolio in teaching on different levels for at least two reasons. First, as a marginal discipline in the business school, it hoped to win legitimacy and respect from other researchers and departments. Second, it hoped get a solid resource base from which to seek external funding in the future. By participating in a master's programme in public administration, for example, they were able to get a number of valuable contacts outside the business school. The teaching policy also had the function of being a major recruiting mechanism, especially in the first years before the group had been recognised and could use external funding to recruit new PhD students and researchers.

The policy group's leader stated explicitly that

the idea was from the start not to define or establish a group on a specific object or disciplinary problem, but on the idea of how to research on the tensions concerning the conditions for management in organizations, and in the meeting between private and public and public and NGO. Policy could of course be one object but it could also be a certain perspective. .. so we defined a special way of working, agreeing on being able to disagree on the discursive analysis strategy as our basic idea.

The pressure for entrepreneurship and creation of new attention was important, and in order to give everybody the impression that something new was happening all the time:

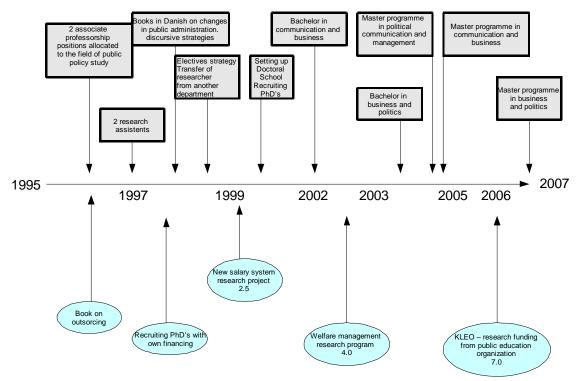
you cannot think in the framework of a zero-sum game or economy, because then you won't get any new 'playmates', at best you might secure a small and stable number of positions.very important for the group to be in a dynamic research environment and the very active doctoral school [at MPP] was decisive in producing expectations setting up new PhD's all the time.One of the advantages of having PhD's is in this connection, that they last for 3 yearsⁱⁱ, so you have all the time a pressure to get new people in the group.

The teaching in the executive master programme created many contacts in public organisations, and access to meetings and speeches in these organisations. Some of these have been valuable for funding ph.d scholarships and a few post doctoral positions. Permanent responsibility for teaching courses and programmes became the access to external resources and data, and internal possibilities for expansion.

In the early days, the diversity of teaching in a variety of programmes produced a stable foundation for the group. From here, the strategy was one of creating good and exciting research environments to attract and inspire members. In this process the research leader saw himself as a resource person, a coach, creating the best environment for the others, even if it meant "moving away from one's own research agenda in order to make space for new and young members of the group, …..it is like being simultaneously a colleague and a coach."

More recently, the group's resources have come from both teaching (for permanent positions) and external funding (for temporary positions). The cross-disciplinarity in the core group created capacity to work on the changing conditions for leadership in different organizational settings and on the boundary between public and private sector. The classic political science fields have been transformed. The group must constantly interact with other research groups and centres, both at the business school and outside. This constant interaction and boundary crossing has made the group more and more central and visible in the business school environment. A good example of how successful the group has become is the fact that the group managed to launch a completely new social science master's programme in political leadership and communication within the framework of the business school. This has become the group's flagship.

FIG. 1:
Timeline Policy group CBS



Internally, the group was growing rapidly from 2 to 15, and also gained an excellent reputation as an interesting research environment, which as known, and where people with research money came and asked to stay and join the group. The reputation is strongly tied to the Danish books published, which were very well received as a new perspective on public management, but also to the way they worked on the boundary of classic political science and relations between the public and the private sector using also a number of sociological theories and organisational analyses. The strong growth and successful external funding and book communication has created an atmosphere of high expectations' to research and to positions. "People want to stay once they have visited," it is often said.

The research agenda first formulated by the group's leader: "how to inquire into the struggle over the conditions for management in organizations", has made political scientist central to the business schools context. In order to keep a special profile for the group and avoid letting the research agenda be "inflated" by disciplinary traditions, while at the same time maintaining some form of identity, the group's research programme has developed its own brand of social theory, drawing on Luhmanian systems theory and Foucauldian power analysis, generally taking a discourse analytical approach.

The group is open about its leadership functions; it is trying to construct leadership at different levels, where "each person is his own research entrepreneur," as the group's leader puts it. "At the department we have tried to redefine leadership into a responsibility one has for one's own work." The redefinition of leadership in this network-based research group creates dynamics, though also problems. "Being so close to colleagues in the group and acting as a coach makes it difficult to act as a leader-manager in situations of conflict, especially when it calls for the dismissal of staff or recruitment of PhDs for assistant professorships". In such situations, the close, almost personal, relations between members of the network constitutes a personal problem for the leader, and after experimenting with different models a solution was found, where personnel management tasks were handed over to the head of department. After the first years of enthusiasm had passed, a major challenge now lies in creating a feeling of growth and change and to reach out to other environments, "it is not necessary to have constant growth if you have important circulation, it is important to have a flow in and out of co-researchers."

This way of leadership put a serious pressure on the younger researchers, both the phd., the postdocs and assistant professors, who are not yet on a permanent contract. The opening of options also opens up the competitive field, and the pressure for self-management to generate own resources and networks for research.

4.2 The history group/centre for business history

The history group took a different road. They were established on the basis of external funding to write the business history of a few very large corporations. The history group developed the discipline of modern history into the area of economic and especially business history. The overall strategy was like the one used by the policy group, starting with teaching, and, especially, collaborating with an economist from one of the established departments at the business school. Here they gained an opportunity to present a historic perspective on business areas like finance, international trade, mergers and acquisitions, and strategy, but closely related to recent developments in these fields. The teaching program proceeded from the well-defined sub-discipline of economic history, a field with a long tradition for empirical studies and for being somewhat aloof to the social sciences, to active method courses and more social science theory based teaching. In the words of the group leader who was a senior associate professor in 1997,

It is through teaching you create economy for research, first by doing electives...it meant I have to move away from the narrow concept of economic history to something more like social science, and I had to take up reading business economy (Porter, Williamsson). After a while it developed into a very popular subject: Danish economic history.

Eventually it developed into a new subject area at the business school, viz., business history, but it took "a number of internal disputes over relevance" to establish the field as teaching area "and an invitation from the new bachelor program in Philosophy and Economy (BA-phil-econ). After some years, we were asked to run a compulsory course in business history at the bachelor's level". In addition to a number of internal disputes to gain recognition from other departments in business economics, the field of business history demanded a redefinition of economic history with an approach to social and economic theory not normally used or accepted in the discipline of history. In this process of re-thinking the discipline the group has moved from marginality to a

more central position at the business school, and have created international networks and conferences based on their perspectives on business history.

Business history became a research program based on a number of large, externally funded projects, especially by companies who wanted a research-based business history.

Then we got external research funding, we were first asked to write the business history of one large bank (Jyske Bank), and a little later we recruited a young PhD from University of Copenhagen to do the history of the large energy company (DONG)".

Many of these company history projects were initiated by the senior researchers, who originally took the initiative to introduce this subject area at the business school. The idea was to produce serious and well-documented studies -- with no barriers in access to sources and no restrictions on the publication of results – but also studies that would have a larger public than that of traditional academic historiansⁱⁱⁱ. Because of the external funding, the history group could recruit a senior researcher and then a number of post-docs.

When we had the opportunity to head the large research program on the history of Danish industry during the war we had to change the informal group to a centre in order to be visible.

The strategy of pursuing external funding based on large company history projects first made the Business History Centre recruit young and open-minded historians from other universities. Based mainly, on its considerable external funding and support from the president of CBS, the group was able to recruit a professor in banking history.

The group now went from being a loose research group to a full centre and formed an advisory board with prominent historians and people from outside the university to create visibility and formalize external recognition. External funding has become a major strategy for the centre and new large business history projects. "Great Nordic opened its archives for us and a little later also electricity company ELSAM," the group's leader proudly declares. The group was at the establishment 1 professor, an associate professor and a PhD student, and has been growing to 10 and among these 3 professors.

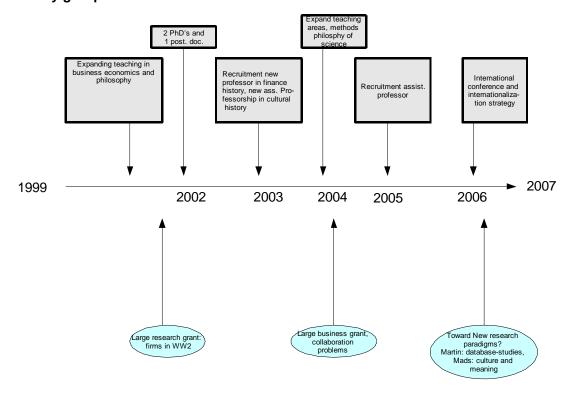
The sub-discipline of business history is today an established field at the business school and the centre has established itself a leader in the field in Northern Europe. The staff at the centre teaches in almost all programmes in the business school, with a heavy emphasis on the combined philosophy-business economic education. By introducing the business history approach, the history group has introduced the idea of source critique, a classic methodology in history, which is not always understood in social science and business economy. It is however still a problem that most of the teaching is outside their core research. They have not built up educations related to their research focus in the way the Political science group has managed. If we try to illustrate the stages or critical incidents, the change is generated sometimes by external funding, and sometimes the internal legitimacy is the dominant factor.

One of the junior researchers has been heavily involved in development of method courses, but now feels the need to go into core areas of his research. The cross-fertilization of the groups and disciplines are less now than earlier, as everybody so concerned about their own research. A new international alliance is exploited for applications to create a small team working on a contextualisation and historic framework of the studies of business culture and identity. The re-interpretation of business development in society has been an important feature of the social science perspectives of research at the CBS.

A good reputation for interesting research and growth of both new positions and new perspectives make the Centre for Business History an interesting research environment for young researchers both nationally and internationally.

FIG. 2:

Timeline History group CBS



The external funding has given the centre a great deal of independence in relation to the business school and the department in its research policy, and turned its relations in networks much more toward external partners^{iv}. The external funding is very much based on the elaborated dissemination of research by the group. They are widely known, as they have a regular column in one of the large newspapers, and their books are very well received and reviewed in the daily press, where the young researchers are very active. The extended involvement in teaching on almost all levels, on the other hand, keeps the centre close to the business school. Compared to the policy group the business history centre has a much more independent role at the department and does not network with other research groups within the business school at the same level of the policy group. External funding remains a very substantial foundation for the Business Historians group, both in terms of outside recognition and recruitment.

One of the younger staff describes how the pressure to generate resources via research councils and private firms is very high. Opportunities are developed, but serious

pressure for competitive behaviour both on the international publications and on generation of funding are creating tensions and entrepreneurial conditions for the career paths.

5 The case of centre for Housing and welfare

The story behind this centre differs in some very important aspects from the story behind the two previous cases. While the two former centres developed gradually and slowly grew mainly based on a combined use of internal resources in the institution (teaching) and first after a while was able to secure large funding from outside sources to stabilize and secure appointments, this centre has a very different story behind its upcoming.

The centre started in 2004, not through a long process of preparation and application, but through the initiative of a private foundation (Realdania), who was established as a part of a merger of financial institutions with special focus on supporting new experiments and research in housing and town planning. Realdania contacted sociologist and former vice-director at the applied research institution Danish Building Research Institute (SBI) Hans Kristensen, and asked if he would set up a research program focussing on welfare and living condition for people with owner homes and with himself as research director. Realdania would then supply the program with 3.5 mill. Euro over 5 years and with supplementary grants the total for the program is 5.5 mill. Euro.

Three conditions are important, firstly, Hans Kristensens former department at SBI was early in after a change of government in 2001 subjected to heavily cuts as a consequence of the new government policy to reduce expert advisory boards. Secondly, Hans Kristensen has been known as an expert in housing and town planning research in Denmark over more than one decade and last, the administrative director at Realdania had personnel knowledge of Hans Kristensen.

The very unusual proposal – in a Danish social science research setting – made it possible for Hans Kristensen to set up a research program and recruit researchers from different departments and institutions. Originally, the idea was to establish a cross disciplinary team at University of Copenhagen with participation of researchers from his former department at SBI. During the preparation it turned out that the specific area of research in welfare and housing was not seen as strategically interesting enough to motivate an active participation of most of the social science departments at the University of Copenhagen. Therefore the research group ended up being organized as a more or less virtual network with researchers from University of Copenhagen, University of Southern Denmark and SBI participating. The research leader Hans Kristensen and

the small administrative staff are located at the department of sociology, University of Copenhagen. Based on his previous experience as vice director in SBI, Hans Kristensen decentralized all personnel affairs to the respective departments in order to focus solely on research matters, and formulated some clear objectives for the researchers participating in the project. Inside the broad framework of welfare and housing the research strategy is focussing on deliveries in the form of articles in international journals and support to the individual researchers in doing so – formulated in a contract with each researcher.

A board was sat up with representatives from Realdania, users of the research (municipal authorities) and Scandinavian researchers in the field of housing research. The board meet twice a year and discuss the research policy and the general results.

An indicator of the trust Realdania has in the project is the fact, that Realdania ask other new and smaller grants in related fields to try to get an association agreement with the project. Also in 2007 Realdania set up a new grant for the project to fund for four new PhD's after a series of applications the Research Council has been turned down.

The research network consists of small groups of 2 to 3 researchers (some professors, some PhD's) from the departments of sociology, anthology and political science from University of Copenhagen, a couple of associate professors from the School of Architecture, 3 economists from University of Southern Denmark and 5-6 researchers from SBI.

To keep the network close and to support cross disciplinary research the group meet one day each 3rd months as well as having a full 2 day seminar once a year.

The physical location at the department of sociology has no special bearing on decentralized the projects, as there are only a limited interest in the department for the themes in the research program.

One important part of the research strategy especially underlined by Hans Kristensen is to support young researchers to be able to create networks supported by extra funding for their participation in conferences, by mentoring their introduction in different connections and other similar activities. This is in order to highlight the personal experience of the importance of networks and the experience that network relations cannot be successful if they are understood from a narrow cost-benefit perspective, eg. only participating in what already is high profiled activities.

"To be active in professional associations might not be of immediate usefulness but over time in builds up a broad range of contacts and connections" and it is "especially important as the

ongoing pressure for performance and usefulness in all activities might spoil the open and unplanned types of contacts, and they might be the ones that are important for future trust building network relations."

An important problem to be discussed by the board in 2008 is strategies to anchoring the project, a common problem for all time limited research projects and it is a question that has not been on the agenda until now. In the case of a project organized primarily as a virtual network, like this one, anchorage strategies are extremely important.

Timeline:

2004	2005	2006	2007	2008	2009
Negotiating	Establishing	Network	Associated	Development	
with	the network	meeting	projects	of anchorage	
foundation,	based		related to key	strategy	
contact to	research		network		
potential	organization,				
researchers	coordinating				
	through				
	contracts				

6. Entrepreneurial change of university research.

A modern research group is not established once and for all; it is itself a process of constant movement and continuous mobilisation of resources, which demands that someone takes responsibility for constructing and reconstructing a learning environment. It is an institutional innovation based on the entrepreneurial behaviour of researchers and leaders, where networking to form new organizing is increasingly important. The collaboration with industry and public institutions both for dissemination of research and for establishing new research collaboration and generation of funding is an elaboration of the type of relationship to industry demanded for

most business Schools to legitimize the industrial relevance of research to create resources for knowledge creation.

Both groups are formed out of an idea of creating a research field and colleagues in their own research interests. The methods used are not only from research, as research communication and teaching, as well as classic internal negotiations known from all large organisations, are used by not only the original initiators, but also by new younger staff coming in to the groups. The positions and resources are not only a "given" from the university, as is usual the tradition at Danish universities.

Merton (1968, 158) introduced the organizational dimension in studies of research and researchers behaviour by emphasising the external network, the peers, and the serendipity of research based on 'un-anticipated' results founded on diversity in order to understand the dynamics of creating new scientific ideas. Nevertheless, Merton limited his discussion of 'the ethos of science' to the narrow world of science (Merton 1968, 604) only to be distinguished from social and political problems and relations in society. The isolation of science and research from society has been broken down (Nowotny et. al. 2001) and Merton's view on science networks has today to be extended with the dynamics of organizational network relations like structural holes and brokerage (Burt 1997, 2005) and more generally the whole organizational world of research, captured by Bourdieu (1981, 1998) in the concept of scientific capital. Following Burt and Bourdieu is every researcher's individual responsibility for contributing to the construction of the university organisation very clear, involving active, entrepreneurial participation both in teaching and research. The market or 'agora' (Nowotny et al. 2001) for this special kind of expertise on the periphery of business economics demands creative thinking and a dynamic leadership and raises interesting issues for the classic Humboldtian university's relationship between research and teaching. Teaching in the internal market at CBS now becomes part of the effort to create research groups, and externally funded research becomes a basis for forming groups of young researchers, who can also develop new teaching programmes. Both pictures are interesting also in the way they generate power in the organisation. In Salancik & Pfeffer's (1977) they discuss how external funding for university departments seems to be a very important dimension of power, but that all departments use their own criteria for access to resources, and thus challenge the power criteria, even if those based on external resources have better legitimacy than those overburdened with teaching. The issue here seems to be that it is hard to see one dimension as the most important. Both dimensions of power and manoeuvring are important for creating internal legitimacy.

The successful research leader, then, is now one who is able to mobilize resources from many different sources, both inside and outside the university system, in order to construct and expand his or hers scientific capital, that is, one who acts like an entrepreneur, and has the charisma to mobilise resources in networks. The strategy and actions are then both tied to a very hierarchical organisation and to the creation of openings and space for horizontal mobilization of resources, as ideas, people and research funding. The recent changes in the function of public universities indicate the emergence of more complex relationships between research and teaching than the traditional Humboldt model. The new established groups and research fields are seen as a result of organising across different organisations and innovation within teaching programmes.

Our study of research leadership at the Copenhagen Business School has demonstrated the need for special qualities for research leadership, such as

- Personal qualities (scientific capital and charisma) in order to create respect and formulate research programs
- The ability to be a broker between networks in teaching and research and not the least in the outside world to create alliances for funding
- To be able to use the external contacts and dissemination of research for access to further research
- To be able to use rules and negotiate in the bureaucracy and develop organizational openings in a creative way
- To create an environment of self management in a collective organized research group to mobilize young researchers to take their own initiatives.

In other words, entrepreneurial leadership in research as a kind of knowledge management rather than adaptation to existing structures and resources is what characterizes the new university environment. It is a creation of opportunities in institutions, where space for research is increasingly squeezed.

7. Conclusion

The understanding of the processes of research leadership is tied to the initiatives and entrepreneurship of researchers to generate new resources both externally and internationally. The shrinking resources to universities, and the limited research time do not allow for much

research^v. An extraordinary entrepreneurial effort by researchers to generate resources to buy research time and build up teams for research may create a basis for real change in research positions, and rethinking of disciplinary fragmented research.

In our cases, we have found interesting similarities and differences in the strategies used in order to build a new and stable research group. The main differences between the cases are rooted in very specific research profiles. The history group/centre was from the beginning a disciplinary based project. Even if it has developed into a very advanced understanding of modern business history, where theory and other disciplines are recognised, the group is still composed of people that hold degrees in history. From this point of view the group can be described as a formation within a disciplinary field, though it is a very successful one in growth, which is not found in other history departments. It is based on an internal hierarchy based on the senior professors central positions in networks of both peers in the humanities and managers of large firms. In combination with the ability to secure significant external grants, the centre is at one and the same time closely integrated in a growing number of teaching areas as subcontractors, and on the other hand rather independent in relation to departments and other units at CBS. The policy group, on the other hand, was from the beginning a much more network-based organization, defined not by its disciplines but by its subject area by specific approaches to the struggle over the meaning of leadership in organizations. This disciplinary openness in defining the group is reflected in the multi-disciplinarity of its members; the group has recruited its members from different social sciences and from different universities, while insisting on a common general approach to research.

Both groups have been very entrepreneurial in many different strategies to gain legitimacy and resources in the Business School. The combination of both internal development and the external legitimacy and access to resources (research funding) has been very important, and is an interesting feature in research institutions like business Schools, who may work on the empirically complex research problems, and may translate these to the complex and integrated problems in educating students. The ability to mobilise and use external resources to form internal identity and teams who can work together to create new legitimacy, whether in teaching or in new collaborations externally, seems to be the most important features of the successful development of otherwise marginal research groups.

However, the group's entrepreneurial strategies differ in the role they have assigned to the classic dilemma between exploration and exploitation in organizations (March 1989). If we look at the two groups from an organizational learning perspective, some very interesting differences become visible. After a few years of existence, the policy group show clear signs of organizational participation in the larger CBS organization primarily by participating in new teaching programmes. After exploring new possibilities, the group converges toward a more exploiting role, learning and cooperating with the environment. The history group on the other hand demonstrates activities much more oriented toward breaking new road, eg. exploring possibilities, and this strategy continues for long period, securing the group external funding but at the same time reducing the groups organization bonds to the larger organization.

If we introduces the organizational culture profile by Cameron and Quinn (1998, 82), we can specify some further differences between the two groups, the leadership and the group formation over time. Both group leaders show clear signs of acting in a kind of adhocracy organizational culture, where the leader is innovative, future oriented and continuously changing and improving actions (op.cit. 108). But as it can be seen quite clearly in the timelines for the two groups, after a while the two groups develop in different directions, the policy group more toward a clan culture, while the history group best can be described as being between the adhocracy and the market culture.

The ability to mobilise and use external resources to form internal identity and teams who can work together to create new legitimacy both in teaching and in new collaborations externally, seems to be the most important features of the successful development of otherwise marginal research groups. The question that remains to be analyzed on a better empirical foundations is whether this process of group formation will result in a group culture that will destabilize the dynamics of the original process. The tendency to observe aspects of an evolving clan culture in the most successful group demands further empirical investigations.

8 Appendix: Methodology

Doing case studies in organizations often challenges traditional methodological ideas of distance and objectivity to research objects and their representation. Alvesson (2003 a & b), put forward

convincing arguments for a research strategy based on what he labels self-ethnography, i.e., using one's own pre-knowledge of the organizational phenomena to be studied in a systematic way instead of following the rules of more technical methodologies for constructing distance in order to obtain objectivity. He explicitly argues that the university is an obvious place for researchers to do self-ethnography. "Self-ethnography is especially of relevance for research on universities and higher education. ... [I]t is not, however, restricted to this" (Alvesson 2003a, 176). In this paper we follow Alvesson's idea and start out with studies from our own world, our own university department. Our empirical material is a collection of interviews with key researchers from our own department, who has managed by entrepreneurial methods to set up new research groups. In order to overcome the obvious possibility of bias in their reconstructed storytelling we have used our own pre-knowledge of the described situations, the history of the actors in- and outside the department, the resistance and support. The first level of validation of their knowledge claims is then following Alvesson the use of the combined effect of our own systematized recollection and a systematic use of archive material (e.g., annual reports, department strategies, budgets). But narratives need to be analyzed by some kind of organizing principle in order to structure the different narratives on the same story in the analysis and in order to accomplish this we use the *critical incident* method to structure and focus the narratives collected by interviews. By presenting different interpretations of the same critical incident, e.g., a special event or period in the research group, we will be able to produce a much more robust analysis. Our use of the method make it possible to focus the analysis and support the narratives with supplementary information and it is a general experience, that the recollection by interviewees and their willingness to communicate is much greater when the focus is on specific incidents (Butterfield, Borgen, Amundson, & Maglio 2005). Combined with the critical uses of theoretical analysis of the input from interviews the first results will be challenged later as the project moves on by a change of space and location in the studies, using narratives and explicating complexity (Tsoukas 2005). During this part of the research program, we will interview research leaders and researchers from different departments, where our pre-knowledge is less developed and later on we will extend the research program to other university departments and research groups in Denmark and beyond.

The Copenhagen Business School in the Danish context is seen as the first social science mover in exploiting the collaboration with other organisations outside the university sphere. What we present in this paper is two cases on how successful individual researcher-entrepreneurs uses a whole pallet of instruments in order to create new research programs. The marginal position combined with the entrepreneurial use of the new Mode 2 possibilities made

the chosen entrepreneurial strategies different and new compared to strategies used in more traditional and disciplinary research environments. At the same time and in the same process they had to fight the fact that the two research areas at the start did not have a legitimate space in the business school research and teaching environment. The entrepreneurial strategies had to be many dimensional, taking on questions of legitimating disciplinary and especially interdisciplinary research and at the same time teaching space and research funding. We draw in the paper some of basic story lines as they are seen from the two key researcher-entrepreneurs, who had no formal research or administrative management roles at that time, who took up the challenge. The cases analyzed here are part of a larger research programme, where interviews will included both other research centres at Copenhagen University (Research manager). The stories are challenged by interviews with younger members of the groups. The two key informants in the core cases can help us to draw a life line of the projects and mark the places for critical incidents. The same method is developed for the other interviews. The narratives are drawing on the core cases, and the other cases are only touched upon marginally in this article.

The method demand the life line and longitudinal perspective, and is not possible to fold out a multiple and diverse case study of many different types of organisations. We have chosen to illustrate the processes in types of cases, where the research is not "just business as usual", but a creative process of generating space for research in a university environment. The focus on critical incidents and entrepreneurial processes open the perspective of the organisational changes, rather than on the typical and normal cases. This is an illustration of the creative process overlooked in many quantitative studies.

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science.

ⁱ The analysis by Gibbons et.al. (1994) and Notwotny et.al. (2001) has been criticised for lack of systematically empirical support and for exaggerating the importance of various observations (Audetat 2001, Fuller, 2001, Weingart 2000, Godin 1998). Despite these criticisms, however, there seems to be broad agreement that recent changes in modern science and knowledge production is owed mainly to the growing influence of market forces on

ⁱⁱ The external teachers are cheaper for the studies, as they have shorter hours of preparation

iii In Denmark Ph.d Students are young researchers employed on normal academic terms for 3 years on a specific Ph.d project

^{iv} Two of the books produced have been shortlisted among 10 in a large newspaper's competition for the best book of the year. One of these was a phd. thesis. by Steen Andersen (2006) De gjorde verden Større, and a large study by the former group leader Ole Lange (2006), Stormogulen. The researchers at the centre together have a regular weekly column in a large newspaper, writing analytical comments on business events to make themselves known in the business community.

^v With less than 50 % time for research according to the contract. Danish university researchers do not even count as researchers in the OECD statistics.