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THE ADOPTION OF MANAGEMENT PARADIGMS IN FINNISH MANAGEMENT RESEARCH 1937–2007

Abstract

Purpose – This study examines when and how the main management paradigms have emerged and prevailed in Finnish management research. It offers a country-specific case on the diffusion of management paradigms in the field of management research.

Design/methodology/approach – This paper is a historical study that uses quantitative content analysis as a methodology. The data consists of research proposals funded by eight of the largest Finnish funding agencies during the time period 1937–2007. The results obtained from this data are compared to the emergence and prevalence of the paradigms in Finnish academic management education, as depicted by course descriptions obtained from the study guides of eight Finnish academic institutions that provide graduate level education in management.

Findings – Management research and management education do not seem to follow the same patterns of adopting different management paradigms. Management paradigms seem to experience upswings in their patterns of use, on average a decade earlier in management research than in education.

Originality/value – As the position of formal scientific management knowledge varies greatly across countries and historical periods, the study contributes to this line of research by giving a descriptive account of the paradigmatic development of management research schemes in Finland which can be compared and contrasted to the development of management research in other countries. The relevance of the study for management theory-building is in contemplating the relationships between the actors creating, diffusing and using managerial knowledge.

Keywords Management paradigms, Finland, Management research, Management Education

Paper type Research paper

The Adoption of Management Paradigms in Finnish Management Research 1937–2007

1 Introduction

The purpose of this study is to define when and how the management paradigms have emerged and prevailed in Finnish management research during the time period 1937–2007. We do this by researching the types of management research projects and doctoral dissertations that have been funded by eight of the largest private and public research funding organizations in Finland during this time period. We also examine the patterns of adoption and the prevalence of the different paradigms, as reflected in the research projects and dissertations. We ask: 1) Which management paradigms are found in research proposals? 2) When did each of the paradigms first appear in the management research proposals? 3) How long did each of the paradigms prevail? 4) Are the paradigms of Finnish or foreign origin? 5) What type of research was funded (empirical studies versus case studies, dissertations versus projects, ideological versus technical approaches)? We will then compare the findings empirically to the emergence and prevalence of management paradigms in academic management education, in order to find out whether there are similarities in taught paradigms and researched paradigms.

From a historical perspective, management education and management research play central roles in the development and dissemination of management knowledge (Guillén, 1994a, 1994b; Engwall and Kipping, 2006; Engwall, 2007, p. 18). The content of management education can, however, also be derived from practical experience and descriptive accounts, and not merely from formal knowledge (Whitley, 1994, p. 171). In this sense, management is not simply an applied science such as medicine or engineering, where formal scientific knowledge is applied to practice; the relationship between formal knowledge and practice is far more complex. Therefore, there is a need to grasp how and why relations between formal knowledge, management education and labour

markets vary between countries (Whitley, 1994, p. 170). The position of formal scientific management knowledge varies greatly across countries and historical periods (Guillén, 1994; Whitley, 1994). Thus country-specific studies are important. However, there is surprisingly little research into the development and financing of management research in different countries to date. Our study contributes to this line of research by giving a descriptive account of the paradigmatic development of management research scheme in Finland that can be compared and contrasted to the development of management research in other countries. The relevance of our study for management theory-building is in contemplating the relationships between the actors creating, diffusing and using managerial knowledge (see Engwall and Kipping, 2006). Our study sheds light on whether or not management research and education should be regarded as one, or two separate actors in the managerial knowledge creation and dissemination framework.

The paper is structured in a following way. First, we will elaborate on management paradigms as a way of depicting the history of management theory. After this, we will describe our research context and methodology. Finally, in the discussion and conclusion sections we will elaborate on the adoption and prevalence of management paradigms in relation to institutional factors, and consider the theoretical implications as well as new avenues for future research.

2 History of management through paradigms

One way of interpreting the development of organizational and management theory is by seeing it as the development of various paradigms in the field (Guillén, 1994a; Wren, 2005; Barley and Kunda, 1992; Abrahamson, 1996, 1997). The four main paradigms of the twentieth century are often thought to be scientific management, human relations, structural analysis and organizational culture (Barley and Kunda, 1992; Abrahamson, 1997).

Scientific management predominated in the US at the beginning of the twentieth century until the end of WWI (Barley and Kunda, 1992) and spread widely across different nations in the first half of the twentieth century (Wren, 2005). Scientific management was followed by the discourses associated with the human relations school, which put social and personal relations, and ways of working such as group work to the forefront of organizational and management theory (Guillén, 1994a, 1994b; O'Connor, 1999; Rose, 1989). During and after WWII, the human relations school was followed by structural analysis, which focused on decision-making, the optimal arrangement of different functions at the organization level, and the formal qualifications of managers in the 1950s (Barley and Kunda, 1992; Abrahamson, 1996, 1997). The organizational culture paradigm turned attention to the symbolic and collective aspects of organizational reality in the early 1980s (Smircich, 1983). During the last decade, approaches emphasizing innovation and innovativeness have emerged at the forefront of both companies' and governmental agendas, and research policy has taken steps away from technology and science orientation towards innovation orientation (Kantola, 2006a; Rask, 2001). Thus, innovation theories are considered by some as the latest paradigm (Seeck, 2008).

Thomas Kuhn took the idea of a paradigm from natural sciences and borrowed the term from linguistics. According to Kuhn (1962/1970), paradigmatic shifts take place when scientists encounter anomalies which cannot be explained by the universally accepted paradigm within which scientific progress has thereto been made. Burrell and Morgan applied the paradigms of sociology to organizational studies in the 1970s in their book *Sociological Paradigms and Organizational Analysis* (1979). A management paradigm typically prevails for 20 to 30 years (Barley and Kunda, 1992, p. 364), and these paradigms consist of both technical and ideological features (Guillén, 1994a, p. 7–15; Barley and Kunda, 1992, p. 363). Ideological features refer to a paradigm's underlying basic assumptions, definitions, and views of the problems that the paradigm's theories

and approaches attempt to analyse. Technical features, on the other hand, refer to the implicit content and techniques of the theories and approaches (Barley and Kunda, 1992, p. 363). Many management trends that prevail at the time a paradigm surfaces reflect its ideology and spirit, even though this is not explicitly emphasised (Seeck, 2008, p. 1). However, when a theory or a frame of reference becomes widely accepted and dominant, and remains so for several decades, it can be considered a paradigm (Kuhn 1962/1970, p. 23). For Kuhn, the emerging new paradigm is perceived to be an improvement compared to the previous one, but in management, paradigms are not necessarily seen as mutually exclusive. An example of this is when the structural analysis paradigm shifted the level of analysis upwards to the organizational level, while it was still possible to solve the problems at lower levels through the approaches of, for example, scientific management or human relations (Guillén, 1994a, p. 15). Nevertheless, the paradigm "framework" is only one way of understanding the history of management approaches; it has also been analysed, for example, through metaphors (Morgan, 1997) and management fashions (Abrahamson, 1997).

Stephen Barley and Gideon Kunda (1992, p. 391) argue that the paradigms have alternated between rational and normative surges of control, and that these surges follow economic longwaves: rational surges during longwave expansions and normative surges during longwave contractions. Eric Abrahamson (1997) complemented this thesis, by establishing that while the longwaves do explain the emergence of rational and normative waves, their post-emergence *prevalence* is explained by the performance-gap thesis: the ability of the paradigms to provide solutions to managerial problems. Abrahamson (ibid, p. 528), on the other hand, states that new managerial rhetoric may shape techno-economic forces rather than merely reflect them, and that new management rhetoric can indeed constitute necessary conditions for macroeconomic upswing (see also Alvesson, 1990, p. 33). Because of differences in the timing of longwaves and institutional factors that result in

managerial challenges, paradigms were adopted dissimilarly and at different times in different countries, thus a national focus in management history research seems to be important[1].

3 Research context

Our data consists of research proposals obtained from eight largest Finnish funding agencies, of which two are public and six are private. These are 1) the Academy of Finland, 2) the Funding Agency for Technology and Innovation (TEKES), 3) the Finnish Cultural Foundation, 4) the Finnish Work Environment Fund, 5) the Jenny and Antti Wihuri Foundation, 6) the Emil Aaltonen Foundation, 7) the Foundation for Economic Education and 8) the Helsinki School of Economics Fund.

In this section, we will briefly describe the development of Finnish research policy as the contextual backdrop of our research. Then we will present the research data collection and analysis methods utilised in the study.

During the first years of Finland's independence, the state did not provide sufficient funding for sustaining academic research. Its resources were somewhat limited, as the organization of state infrastructure, international relations, national defence, and elementary and vocational education drained most of the financial resources (Tiitta, 2004, p. 24). In addition, funding of research and education was not considered to be the responsibility of the state; public expenditure on these was increased only when sufficient latitude was occasionally found in state budgeting.

The business community wanted to secure the availability of professional personnel and thus contributed to the founding and funding of the first business schools (for example, the Helsinki

[1] For summary of adoption patterns of various paradigms in the United States, Great Britain, Germany and Spain, see Guillén, 1994a, p. 268, 273, 277. For the adoption of Taylorism in Great Britain, see Kipping, 1997; in Japan, see Warner, 1994. For the adoption of human relations in Turkey, see Üsdiken, 2004.

School of Economics, which was originally a private business school, see Michelsen, 2001) and the funding organizations that made research into management possible. After Finland became independent in 1917, the Foundation for Economic Education (est. 1919) was established by Finnish businessmen. The multidisciplinary funds of Emil Aaltonen (1937) and Jenny and Antti Wihuri (1937) also played a central role in management research funding (Seppälä, 1987; Salonen, 1992). The founders of these funds were affluent industrialists who saw the importance of supporting the cultural development of Finland. The Emil Aaltonen Foundation focuses exclusively on scientific research (Seppälä, 1987, p. 56), while Jenny and Antti Wihuri's Foundation and the Finnish Cultural Foundation also support arts. Only the Foundation for Economic Education and the Helsinki School of Economics Foundation are devoted solely to the funding of economic and business administration research. Labour market organizations have also shown an interest in management research. In Finland, according to legislation, an employer must have accident insurance to cover its employees. Two percent of the total amount of insurance premiums paid by all Finnish employers is collected by the Federation of Accident Insurance Institutions (FAII) and constitute the so-called industrial safety funds. Labour market organizations proposed that an organization should be established to allocate the safety funds according to applications, and succeeded in forming the Finnish Work Environment Fund (FWEF) (Väänänen and Hiltunen, 1999), that supports projects with results that can be utilized for the development of improving the work environment and (industrial) production, as well as the overall development of work life (Finnish Work Environment Fund, 2008).

During the first years of Finland's independence, professors' salaries were low, and instead of focusing on research, many of them concentrated on securing secondary occupations. (Pohls, 1989, p. 24–25.) In Finland, all efforts had to be focused on paying war indemnities, rebuilding infrastructure and relocating refugees. Private funding organizations played a significant role in

research funding. The problematic situation of the Finnish research scene did not, however, go unnoticed. From 1947 onwards, the state started to allocate funds for securing the highest-class academic research in Finnish universities (Halila, 1990). Today, most academic research in Finland is conducted in universities, and its public financing includes core institutional funding from the Ministry of Education and peer-reviewed grants awarded by the Academy of Finland and Tekes. Finland is one of the few countries to have a performance-based component in state funding (Geuna and Martin, 2003, p. 288).

From the 1970s onwards, efforts were made to increase co-operation in research activities between universities and business communities. Universities increasingly started to carry out commercialized research that was funded from outside school budgets. (Pohls, 2005, p. 43.) At the beginning of the 1990s, science- and technology policy received emphasis in state economic policy; know-how became an important factor of production (Heikkilä, 2007, p. 25). In general, this reflects the international development described by Bertilsson (2001, p. 31), where research policy orientation has shifted from a traditional, strongly science-governed type of knowledge production (mode 1), to a situation where the search for knowledge is driven by strategic needs of a larger context, such as the state (mode 2). Mode 2 science governing puts emphasis on *innovation* rather than on the production of 'privileged knowledge' (ibid, 32).

Funding has continuously increased in Finland since the beginning of the 1980s. In particular, the investment of companies into research and development has significantly grown in comparison to that of universities and other public research funding bodies in Finland. At the end of the 1960s, the share of the private sector of research expenditure was 50%, public 49% and foreign 1% (Pohls, 2005, p. 42–43). In 2006, research and development expenditure was 3.5% of the GDP, 5.8 billion Euros in total. Of this, the share of the public sector was 1.7 billion Euros (29%) and the share of

private sector 4.1 billion Euros (71%). The private sector funded research in universities and research institutions to the sum of 140 million Euros. (Tekes, 2007.)

Methodology

The research was conducted as a *quantitative* content analysis, which is a way of obtaining a general impression of a large amount of data (Hansen, Cottle, Negrine and Newbold, 1998). Flick (1999, p. 195) points out that while content analysis is an effective way of categorizing text, the true content and nuances of the text might easily become distorted. To avoid this, we have paid particular attention to the definitions and foundations of categorizing that we have used in the analysis frames. Our research data consists of two sets of material; research proposals and management education course descriptions. We will first describe the research methodology for research proposals, followed by the methodology for management education course descriptions.

Initially, we contacted the ten largest Finnish research funding organizations, both public and private, (as measured by the amount of funds granted in 2006 that provide funding for scientific research in social science, economic science and technology). Two of these organizations were public and eight private. We found that one of the organizations did not provide funding for management research, and was thus excluded from our research. After an initial overview of the available data, we also left out another of the ten organizations initially selected, the Alfred Kordelin Foundation, as its role in management research funding turned out to be minor. The eight remaining organizations all agreed to participate in our study (see Table 1).

Name of the Funding Organization	**Year of Foundation**	**Funds Granted € (2006 total[a])**	**Data Available**	**Data Collected (N)**
Funding Agency for Technology and	1983	465 000 000	Final reports of technology	28

Innovation (TEKES)			programs	
Academy of Finland	1970 (1948)	257 000 000	Research proposals	76
The Finnish Cultural Foundation	1939	18 300 000	Research proposals	90
The Finnish Work Environment Fund	1979	9 500 000	Research proposals	103
Jenny and Antti Wihuri Foundation	1942	8 000 000	Research proposals	170
Emil Aaltonen Foundation	1937	4 300 000	1937-2002 lists of grant receivers 2003- Research proposals	93
Foundation for Economic Education	1919	2 800 000	1940-1982 Lists of grant receivers 1983- Research proposals	142
Helsinki School of Economics Foundation	1974	979000	1974-2003 Lists of grant receivers with a brief summary of research topic 2004- Research proposals	106
				Total n=800

[a] Only a part of this sum is granted for management education. As the definitions and categories of the organizations' funding statistics vary a great deal and the value of money has changed many times during the period 1937–2007, we did not define the exact sums devoted to management research.

Table 1 Years of foundation, funds granted in 2006 and data collected from the eight largest funding organizations financing management and organizational science in Finland

Data collection was conducted from September to December, 2007. We first looked through printed lists of yearly grants that these eight organizations had conferred from their annual reports or the

executive committee minutes. These lists contained the name and title of the grant receiver(s) and the topic area or, in most cases, the full title of their research. Based on the information on these lists, we selected the research that might be relevant for our purposes. *A total of 800 research undertakings were included in the analysis*. The criteria for selection were:

- Management, organization and/or administration is mentioned in the title *or* the names of the selected paradigms[2] are mentioned in the title.
- In the first three decades (1937–1959), names of known management scholars (discovered from secondary sources) were also used in the selection of research work, because the research topics at that time were more or less vague (for example, "Research in business").

Other criteria were that the research undertakings were either doctoral dissertations or research projects carried out by individual researchers or research groups in universities or other academic research institutions. Grants solely for conference trips or other purposes, such as printing and translating expenses were left out of the analysis. Hence, in the selected research, the funds granted were used mainly for salaries, the allowances of full-time research staff, and their research expenditure. The assumption here is that the more relevant, topical and original a research effort is perceived to be by the funding organizations, the more likely it is to receive a grant (Benner and Sandström, 2000, p. 293).

We received permission to read through the selected printed research proposals, which were attached to the original application as a separate document or as a part of the application letter or form[3] and stored in the archives of the funding organizations. We were not, however, permitted to take the proposals outside the archives, make copies of or present direct quotes from them, as they

[2] scientific management, human relations school, structural analysis, organizational culture, innovation theories
[3] The requirements for applications have changed significantly. In the 1940s, where the earliest of our data are found, an informal letter written by hand briefly and sweepingly describing why funding was requested was sufficient. Currently,

were confidential documents. This limited our selection of methodology. The analysis had to be conducted on the premises of the funding organization, within a limited time frame, which in practice was from one to two weeks. Given these restrictions, we considered quantitative content analysis to be the most suitable. Without the possibility to present direct quotes of the data, using qualitative research methods would have been difficult at best.

The research proposal documents selected are typically 5–20 pages in length and present the research setting, theoretical background, bibliography and, where applicable, preliminary results from previous funding periods, as well as the author biography and timetable. The purpose of the proposal is to state reasons why the project is important and relevant and should receive funding, as well as to indicate that the applicant/group of applicants is capable of carrying out the project. The number of research proposals analysed from each funding organization is shown in table 1. The number of research proposals analysed per decade is shown in figure 1. The first relevant research proposal we found dates back to 1940.

Take in Figure (1)

We used individual research proposals as units of analysis, and defined which paradigms were present in each proposal by the categorization listed in appendix 1. We also coded the proposals' basic approach: theoretical, empirical or case-study, and stated whether the proposals had an ideological or technical orientation. Following Guillén (1994a, p. 3–4), in this study, ideology refers to the framework through which the relevant issues are framed and choices between alternative paths of action are made, while technology refers to the practical tools and techniques developed in the paradigm. The ideological and technical features of the paradigms are summarised in appendix

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funds are applied for using detailed, often electric forms that are several pages long, and accompanied with letters of recommendation and detailed research proposals.

1. We also included a category, marked “other” by the means of which we kept a close eye on any other approaches that might emerge from our data, and coded them by name or description. In this category, two approaches, which were not included in our initially selected paradigm, were repeatedly found: strategic management and human resources management. For the final analysis, these were coded into their own respective categories. No other approaches emerged from the category "other".

After about halfway through collection and coding, the data started to saturate. We repeatedly came across the same applicants and projects through different funding organizations. We considered this in part to indicate that we had indeed managed to select a set of data that represents the Finnish management research scene. This phenomenon was also helpful when coming across deficiencies: three of the funding organizations had filed applications for a limited time period only (see table 1). With the help of materials from the other organizations, and secondary sources such as the completed dissertation or research project publications, we were able to successfully code this imperfect data.

Our second set of data was collected from eight schools that form the core of Finnish higher management education and have operated the longest. These are: Helsinki School of Economics, Swedish School of Economics in Helsinki, Turku School of Economics, Helsinki University of Technology, Lappeenranta University of Technology, Åbo Akademi University Business School, University of Tampere and University of Vaasa. Management course descriptions obtained from the study guides of the eight schools were analyzed using the same framework (appendix 1) as in the analysis of research proposals to define the patterns of adoption and prevalence of management paradigms in Finnish management education in terms of courses. Accurate course descriptions became available in 1980; hence our analysis of the course descriptions only covers the period

1980–2007. Our sample interval was three years, because no major changes were made annually to the contents of the courses.

4 Different paradigms throughout the decades

Figure 2 shows the relative frequencies of management paradigms found in the research proposals analysed between 1970 and 2007, and in the academic management education courses analyzed between 1980 and 2007. The number of relevant research projects funded before the 1970s is so low in comparison to those funded after, that displaying them in chart form is not feasible. They will, however, be discussed in this section where appropriate. In general, from the 1940s to the 1950s, most of those who received grants were established professors, writing textbooks of management and organization. We found no information of grants for management research before the 1940s. In the next sections, we will compare and contrast the patterns of use of each paradigm in research proposals and management education.

Take in Figure (2)

Absence of scientific management from Finnish management research

There has been some research into scientific management since the 1970s, but its amount has constantly diminished. Before 1970, only three research proposals using this approach were found from our data. Based on our findings, scientific management is largely absent from Finnish management research. This is not surprising given the shop-floor pragmatic nature of scientific management. In Finland, interest towards the techniques of rationalisation grew significantly in the 1940s (Tuomisto, 1986, p. 209), and scientific management had a significant impact on the vocational education of foremen. This vocational education, however, was conducted in Finland by private actors as opposed to academic institutions (Tuomisto, 1986; Kettunen, 1994). Our data

illustrates that scientific management is also largely absent from academic management education. It thus seems that scientific management was promoted in Finland by actors outside academia.

Steady growth of human relations in Finland

Human relations emerged in Finland simultaneously with scientific management (Kettunen, 1994, 1997). Kari Lilja (1987) argues that the formation of human resources management, and relatedly, the human relations approach in Finnish businesses took place at the turn of the 1950s and 1960s, and that the 1970 heralded the decade of human resource management (Lilja 1987, 186–188). The share of human relations paradigm in research proposals did, indeed, decrease slightly from the 1970s to 1990s, but has again grown in the 21st century. In our analysis, human resource management education has also slightly increased during the period of analysis of 1980–2007, suggesting a similar re-emergence.

Dominance of structural analysis in 1970–2000

The structural analysis paradigm was the most common paradigm in management research in the 1970s, at almost 20%. Strategic management took the place of structural analysis as the most popular approach in the 1980s and the 1990s. There was a similar development in management education, however with a ten-year delay, when the number of courses for teaching strategic management exceeded the number of courses for teaching structural analysis in the 1990s.

We suggest that rather than functioning as a conceptual antithesis, the strategic management approach forms a continuum and elaborates on the structural analysis paradigm: Strategy has been discussed by writers of the structural analysis paradigm such as Alfred Chandler, who in Strategy and Structure (1962) considered organizational structure a product of strategy, in that structural changes are made in order to meet the needs arising from the strategies of further expansion. Also,

Peter Drucker's concept of management by objectives presented in his book *Practice of Management* (1954) brought up the procedure of setting objectives and monitoring the progress made towards them on the organizational level. Drucker's ideas were influential in Finland, particularly through the consulting and educating company Rastor (Ainamo and Tienari, 2002, p. 78). Unlike the strategy process, however, the structural analysis paradigm elaborated on the match between organizational structure and the environment. Subsequent authors on strategy have focused more on the tools for the strategy process itself, for example, different portfolio analyses (e.g. Boston Consulting Group's Growth-share matrix), defining core competencies (Hamel and Prahalad, 1990) and typologies of strategies for different competitive situations (e.g. Porter, 1980).

Innovation theories dominates the new millennium

The innovation "paradigm" is the most commonly used approach in management research in the 21st century to date, and the second most used paradigm in management education. Unlike the three paradigms following scientific management, the innovation paradigm has received significant support from the government, which provides different forms of R&D funding, supports and enforces the paradigm in its own actions and institutions, and deliberately strives towards a more creative and innovative Finland (Himanen, 2004; Prime Minister's Office, 2007). Finland's national competitiveness is nowadays considered to be tied to the ability to produce innovations (Kantola, 2006a; 2006b). This supports findings of research, which claim that the state's favourable attitude and support towards a paradigm positively affects its adoptions patterns (Guillén, 1994).

The insignificant role of organizational culture

Research that can be considered to follow the organizational culture approach has been carried out since the 1970s. It was never the most commonly used paradigm in any decade. In 1990's, its share was at its largest, a little less than 10%, thus reaching the rank of third most popular paradigm. In

management education, organizational culture has largely remained a curiosity and a topic of special, non-obligatory courses, but has yet to disappear altogether.

5 What type of research was funded?

In addition to analysing in terms of which paradigm they belong to, we recorded other information from the proposals (see appendix 2). These include the general research method used (theoretical, empirical or case study), type of study (dissertation or project) and the orientation of the research (technical or ideological, or both) as defined by Barley and Kunda (1992).We will next discuss our findings in relation to these.

Figure 3 shows the comparison of management paradigm adoption patterns in empirical and case studies. There were not many differences between theoretical, empirical and case study methods in the patterns of adoption and prevalence of management paradigms. The human relations paradigm has a long tradition of empirical studies with regard to, for example, studying vigilance and group phenomena in a laboratory-like setting (e.g. the Hawthorne studies, see Wren, 2005, p. 279–300). This tradition also appears in our results, where the human relations paradigm is clearly more strongly represented in the empirical studies in comparison to other main paradigms.

Take in Figure (3)

Finally, we compared the research of ideological and technical features in research proposals. There has been more research into the technical features of the paradigms than their ideological features (see Figure 4). Less than ten percent of the research proposals in our data combined ideological and technical components, while a little fewer than 70% of the proposals researched technical features.

Take in Figure (4)

When comparing the numbers of dissertations (licentiate and doctoral) and projects in different decades since 1970, the share of dissertations was the highest in the 1990s, at almost 90%. The 1970s and the present decade are similar in the proportions of dissertations and projects, at 70% and 30% respectively. The share of licentiate dissertations, however, has gone from 20% in the 1990s to being almost non-existent. This is due to changes in legislation - the licentiate dissertation is no longer a compulsory intermediate degree leading to a doctoral degree. There were no significant differences in the patterns of use of different paradigms between doctoral and licentiate dissertations and research projects. The first doctoral dissertation found from secondary sources is the work of Paavo Koli (1955) that discussed prejudice in organizations and represents the human relation paradigm (Tiihonen, 1992, p. 58). The first grant awarded for a management research dissertation in our data was Jukka Vihersaari's, received in 1965 for a doctoral dissertation that discussed decision-making in an organizational context.

6 Discussion: The role of management research in managerial knowledge diffusion

Managers' retrieval and use of managerial knowledge can be regarded either as *consumption*, where they actively acquire and select managerial knowledge, or as *diffusion*, where managers more passively receive managerial knowledge through different circulation patterns of ideas and practices (Alvarez *et al*., 2005, p. 129). From the consumption perspective, Alvesson (1990, p. 33) has discussed the explanations for the popularity of different approaches and schools of thought in organizational and management studies. He concludes that their popularity depends partly on their intellectual and theoretical qualities, and partly on the extent to which the needs of the dominant elite groups and/or the general market for academic knowledge are met (this market Alvesson sees as an aspect of the *Zeitgeist*) (ibid.). Many argue that extra-scientific forces have played a

significant role in shaping organizational science, but that on the other hand, organizational theory has gone to great lengths to meet the expectations of the business community (Alvesson, 1990; Guillén, 1994a, 1994b; Barley and Kunda, 1992, Whitley, 1994).

From the *consumption* perspective, the popularity of the case study method in our data leads us to presume that in order to gain access to their cases, and to offer something of value for the case company, researchers have had to find research topics that are relevant to the business community. Our results indicate that in the Finnish business community, rather than directing most of the funds to new and pioneering approaches that may or may not become relevant in the future, the main managerial problems are addressed in Finnish management research. The adoption patterns of different management paradigms in research seem to follow those analyzed in the annual reports of large Finnish corporations (Seeck and Eräkivi, 2008). For example, the innovation paradigm peaked in annual report texts two decades earlier, in the 1980's, than in management research (ibid). The views presented by Alvesson (1990, p. 33) and also by Abrahamson (1997) are that the popularity of managerial approaches depends, to a degree, on their ability to provide solutions to practical managerial problems.

Engwall and Kipping discuss the *diffusion* of managerial knowledge (2006, p. 97; Engwall, 2007, p. 18), through a model in which practice, business schools, consultancies and the media are in constant interplay. Engwall and Kipping state that there are mimetic pressures inside each of these fields and that the largest and most powerful actors become role models for other players within the field, moving them towards common behaviour. Another feature of the model is that there is a flow of information and people *between* the fields (Engwall & Kipping, 2006, p. 96). Indeed, according to our results, *all* the funding organizations researched, both public and private, conform to similar patterns in funding management paradigms. Alvesson's (1990) *Zeitgeist,* the characteristic spirit of a

period, is one way of explaining this. Another way is *institutional isomorphism*, which is described by DiMaggio and Powell (1983) as a process where units facing the same set of environmental conditions start to resemble each other. It also constitutes the premise of Engwall and Kipping's (2006) model of management knowledge diffusion. Funding organizations can indeed be seen to fulfil some traits that DiMaggio and Powell (ibid.) describe as predictors of isomorphic change; the ambiguity of goals, the reliance on academic credentials when choosing staff (this is particularly true for the expert staff members that are responsible for making funding decisions), and professionalization of the field. The collegial orientation of scientists is further fostered by academic procedures such as peer review (Benner and Sandström, 2000, p. 292). According to Whitley (1994, p. 176), academics thus become more independent of lay demands, which implies that they focus on problems that are relatively remote from current practitioner interest and techniques.

But what exactly is the position of management *research* in managerial knowledge dissemination? In their model, Engwall and Kipping (2006) place both management research and management education under the "Business School" field. According to our data, management paradigms seem to experience upswings in their patterns of use, on average a *decade* earlier in management research than in education (see table 2). For example, the human relations paradigm was mostly researched in the 1970s and its share was the smallest compared to other paradigms in the 1990s; while for teaching, the 1990s were peak years for its popularity.

Paradigm	**Peak decade of popularity in management research**	**Peak decade of popularity in management education**[a]
Scientific management	1970s	1980s
Human relation	1970s	1990s
Structural analysis	1970s	1980s

Organizational culture	1990s	1990s
Innovation theories	2000s	2000s
Strategic management	1980s	2000s
Human resource management	1980s	1980s and 2000s

[a]Education only researched between 1980-2007

Table 2 The emergence of management paradigms in Finland, comparison of academic management research and management education

We suggest that education and research should be separated from each other in the models that attempt to explain the diffusion of managerial knowledge, as they do not seem to follow similar patterns in adopting different management approaches and thus their prevalent *content* is different at the same point of time – despite the fact that both activities take place in business schools. Another backing for this suggestion is the fact that academic management and research institutions only have a limited influence on what topic areas and approaches their research handles. The funding organizations – not the research organizations – make the ultimate decision on which research undertakings from the selection presented to them by the applicants will be carried out, as their grants are a necessary resource for conducting research. The business schools can only decide what they apply the funding to, and thus are not the only ones that influence the funding outcomes and the development of the field that Engwall and Kipping (2006) have labelled "the business school".

Management research traditions and developments in different countries need to be more extensively researched to complement the ongoing lively and multifaceted discussion on the diffusion of management innovation on the one hand (Birkinshaw, Hamel and Mol, 2008; Guillén, 1994; Barley and Kunda, 1992; Abrahamson, 1991; 1996; 1997), and the history of management education, and the comparison of American and European management traditions on the other (e.g. Tienari and Laurila, 2007; Amdam, 1996; Amdam *et al*., 2003; Engwall and Gunnarsson, 1994,

Sahlin-Andersson and Engwall, 2002). Earlier, Üsdiken (2004a) has compared the adoption of Human Relations in Turkish academia both in general, and in teaching in particular, and found that the penetration of human relations into curricular structures was a slower and more difficult process than penetration into the academic community, as reflected by the scientific articles and public lectures. In line with Üsdiken (ibid.), our results lead to a conclusion that there has been little active choice at the receiving end of international trends in Finland; the post-war American influence has significantly influenced the Finnish management research scene, even to the point of there being no distinctively "Finnish" management research tradition. We were unable to find any Finnish paradigms or approaches emerging from the data in the category "other" in our analysis. The paradigms found were the international paradigms scientific management, human relations, structural analysis, organizational culture, innovation theories, strategic management and human relations management. Thus, Finnish research tradition seems to be imported mainly from the United States, where the main management paradigms have largely originated (Guillén 1994) and, like management education, management research in Finland seems to be "Americanized" (see Engwall 2004, Üsdiken 2004b). We agree with Alvarez *et al*. (2005) in that the models of managerial knowledge consumption and diffusion complement each other rather than rule each other out. However, more research is needed on the interaction of different fields of management knowledge creation and use.

Appendices

	Scientific management	Human relations	Structural analysis	Organizational culture	Innovation theories
Ideological features	*Perceived problem* Soldiering, waste, disorder, management arbitrariness and greed, lack of control.	*Perceived problem* Monotony of work, conflict, unrest, absenteeism, turnover, low morale.	*Perceived problem* Organizational structure -technology - environment mismatch.	*Perceived problem* Low productivity, low commitment, management of professional employees.	*Perceived problem* Need for constantly improving and coming up with new products and solutions to the market in order for the organization to stay competitive.
	General form of solution: One best way.	*General form of solution:* One best way.	*General form of solution:* Contingency approach.	*General form of solution*: Contingency approach.	*general form of solution:* Contingency approach.
	View of industrial conflict: Avoidable: more surplus benefits both workers and management.	*View of industrial conflict:* Avoidable: co-operation is in human nature. The organization as a social system.	*View of industrial conflict:* Is structurally-shaped, and not necessarily bad, generates change.	*View of industrial conflict:* Conflict illustrates clash of organizational and individual values.	*View of industrial conflict:* Is structurally-shaped, and not necessarily bad, generates change.
	View of workers and way of dealing with them: Driven by self-interest; need to be told what to do, and supervised.	*View of workers, and way of dealing with them:* Driven by psychosocial norms, needs, emotions; need to be lead.	*View of workers, and way of dealing with them:* Driven by professional aims and professionalism, with aims to improve expertise or managerial skills for example through management education. Structural position impacts the behaviour of both, the employees and the managers. Need to be treated as rational actors, as professionals.	*View of workers, and way of dealing with them:* Driven by a need for belonging. Workers have other objectives besides pay, for example a need for commitment. Workers can be led by altering their values and attitudes to match the aims of the organization (in organization has a culture, i.e. cultural engineering, approach).	*View of workers, and way of dealing with them:* Driven by a need for renewing oneself continuously. Workers have other objectives in addition to pay, for example a need for using their creative potential and knowledge. Particularly in knowledge-intensive organizations, workers are seen as the most valuable asset of an organization. Though they are rather easily replaceable and providing long career is not often an organizations aims, rather it is to constantly renew the organization, including it employees and hence quickly adapt to the needs of the market.
Technical features	*Fascination with*: Machinery, technology, factory aesthetic, mass production.	*Fascination with*: Communal life, interaction in social groups	*Fascination with*: Ubiquity and complexity of organizations in modern society.	*Fascination with*: Community, shared values, habits, practices, building reality through social interaction.	*Fascination with:* Novelty, change and creativity, innovativeness, continuous improvement and flexibility
	Methodology: Time and motion study, job analysis, piecework.	*Methodology*: Surveys, interviews, discussion groups, job rotation.	*Methodology*: Comparative study of cases, typologies of organizations.	*Methodology*: Expressing and defining organizational values (vision and mission to which everyone commits), target setting and personal commitment to them, harmony of values, assumptions, and working practices.	*Methodology* With innovative groups, intensive methods such as brainstorming, role-plays, shock experiences and visits to new environments. More generally, open-office spaces are common as is securing sufficient funding of research and development. Customer-driven, open to continuous improvement, and ready to reform ways of operating.

Appendix 1 Ideological and Technical Content of Management Paradigms (adapted from Guillén, 1994a, p. 10–11).

Year	Year of funding decision
Applicant	The person or persons who apply for funding
Affiliation	The university or research institution where research is conducted
Subject	The title or subject area of the proposal, provided by the author
Basic approach	Theoretical, empirical, or case study
Type of study	Dissertation or project
Orientation	Ideological, technical or both
Paradigms used	five paradigms and a category "other" from which human resource management and strategic management were found

Appendix 2 Coding Frame

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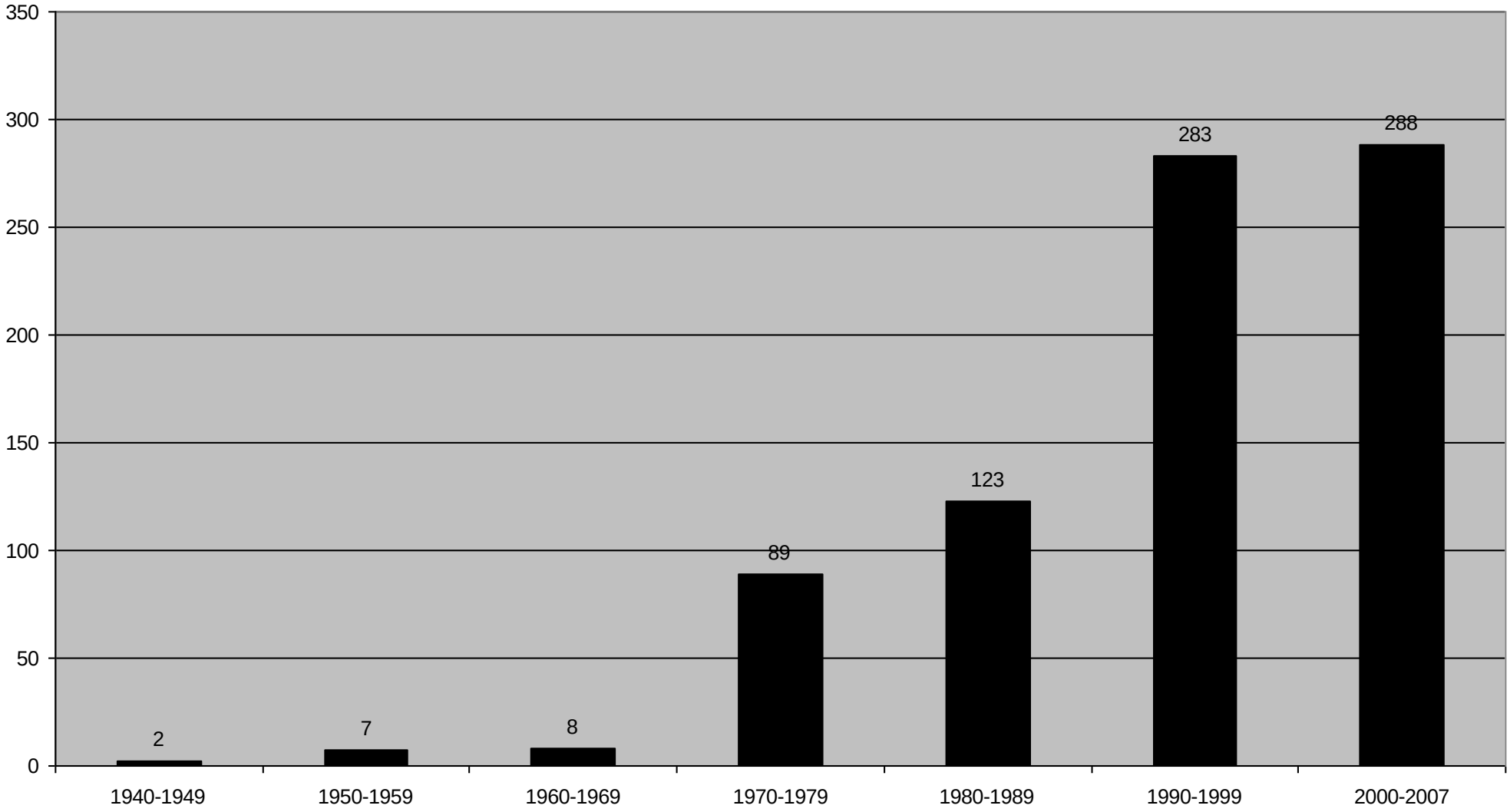
Figure captions

Figure 1 Number of management research proposals analyzed, 1940-2007 (n=800)

Figure 2 Management paradigms in research proposals and management course descriptions

Figure 3 Comparison of management paradigm adoption in empirical and case studies, 1970-2007

Figure 4 Ideological and technical features in research proposals, 1970-2007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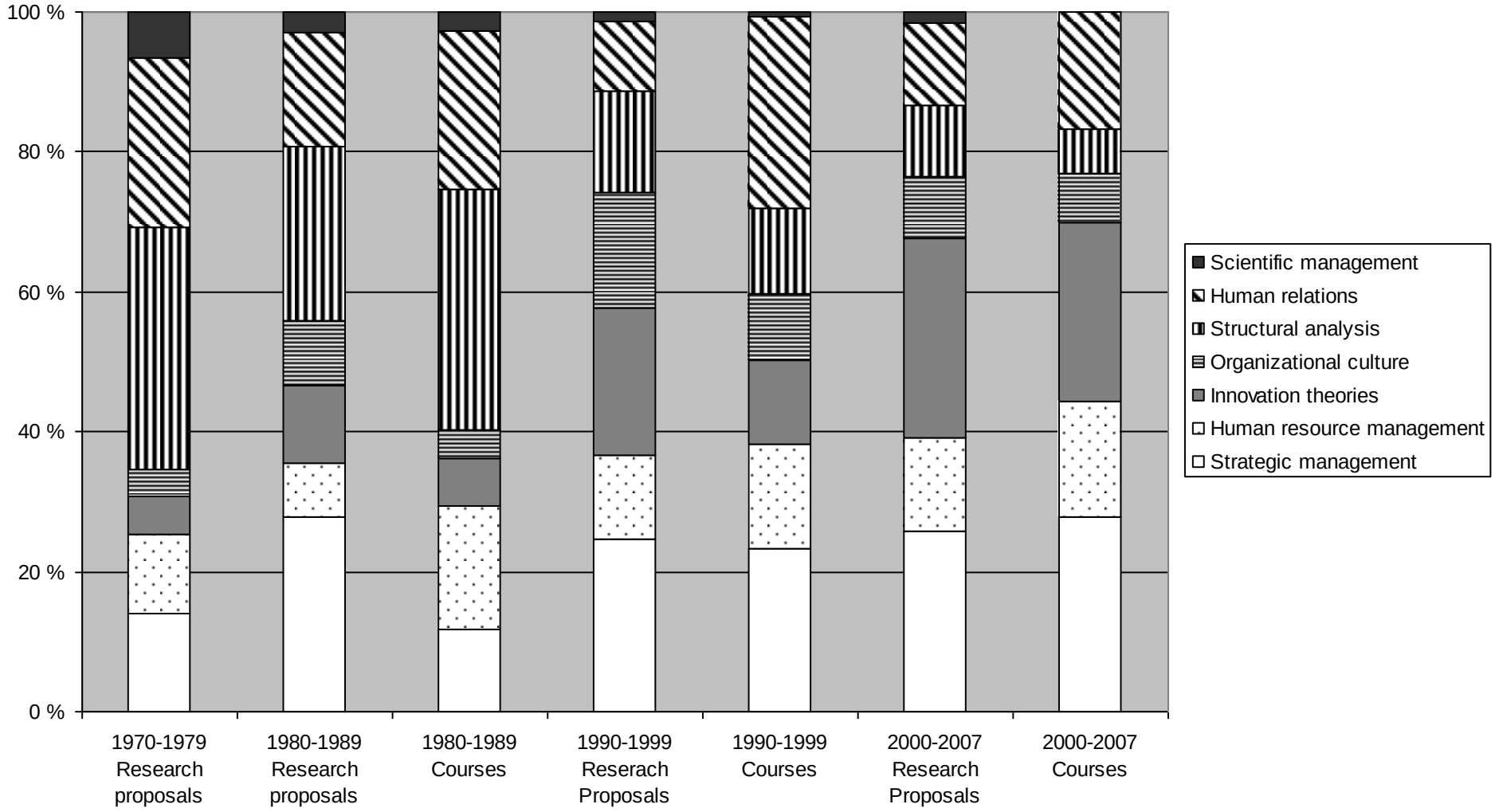
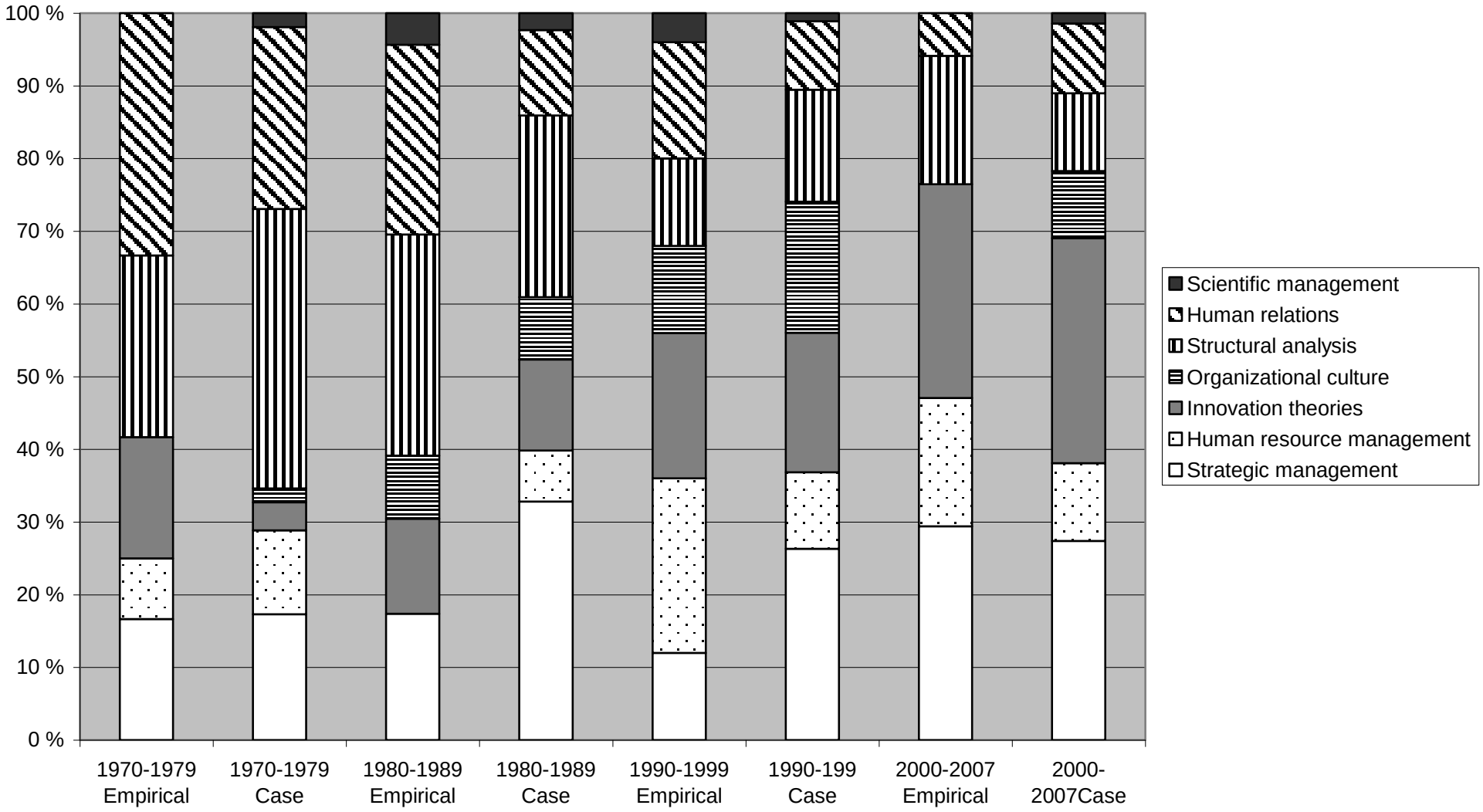
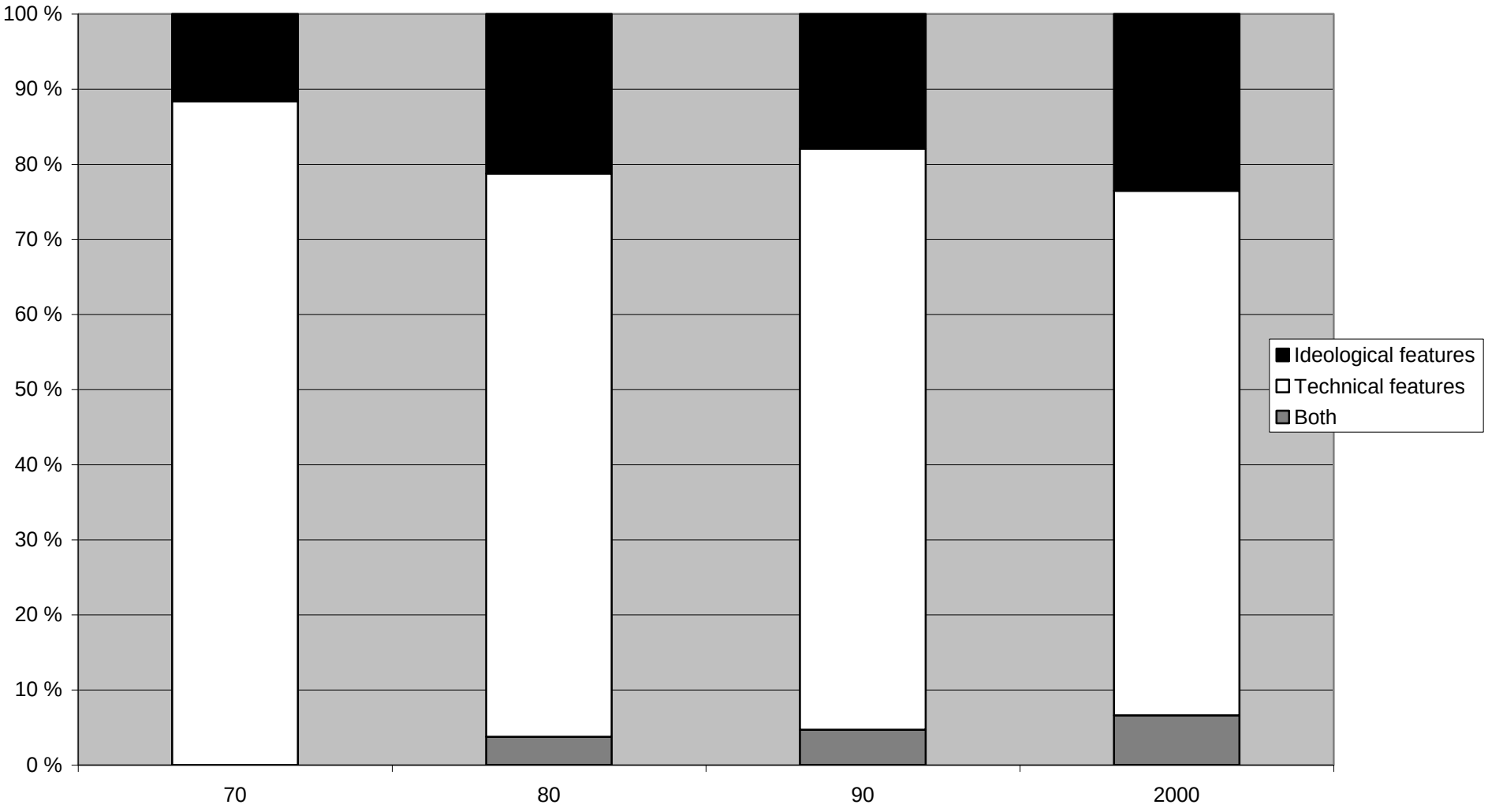
Management paradigms in research proposals and management course descriptions



Comparison of management paradigm adoption in empirical and case studies, 1970-2007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