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MANAGEMENT PARADIGMS IN PERSONNEL MAGAZINES OF THE FINNISH METAL AND FOREST INDUSTRIES

Purpose The paper examines the manifestation of management paradigms in personnel magazines of Finnish metal and forest industry corporations from the 1930s to recent years.

Design/Method/Approach The research data consist of articles of personnel magazines on management. The articles were analyzed by quantitative and qualitative content analysis.

Findings The findings indicate that normative paradigms, such as industrial betterment, human relations school, and organizational culture, are more often discussed in personnel magazines than rational paradigms, although earlier studies suggest that in general rational management paradigms have been more influential in Finland. The frequent use of normative paradigms can be seen as a tool in enforcing the role of personnel magazines in generating a sense of belonging and togetherness among employees. Normative paradigms are also discussed more frequently in articles that are written from the viewpoint of the worker than those written from the viewpoint of the manager or company.

Originality/value of paper The study offers empirical evidence on the adoption of management paradigms in different lines of industries. It also shows that personnel magazines provide a rich and interesting source of data, which could be used more frequently than has traditionally been the case.

Keywords Management paradigms, management history, organizations, metal industry, forest industry, Finland

Paper type Research paper

1. Introduction

Management ideas can be considered paradigms, or groups of similarly orientated theories, techniques and models with a shared ideological basis (Guillén, 1994). Mauro Guillén defines a paradigm as a system of interconnected ideas and techniques that offer a distinct diagnosis and solutions to a set of problems. The *ideas* are based on an ideology that presents a certain view of organizations and their aims as well as of workers, management and the hierarchical system of the organization. Ideology is also used to justify authority structures. The *techniques*, on the other hand, are the actual methods used to manage the workers in order to fulfil the ideological goals of the paradigm (Guillén, 1994). The history of management has also been seen as an alternation between normative and rational ideologies (Barley and Kunda, 1992; Guillén, 1994; Abrahamson, 1997). Guillén (1994) notes that there is no set template for the introduction of paradigms; instead, local conditions tend to generate "tailor-made" solutions.

This paper analyses the manifestations of management paradigms in personnel magazines of the major corporations operating in the Finnish forest and metal industries. The management paradigms explored are industrial betterment, scientific management, human relations school, structural analysis, and organizational culture. The selection of paradigms is based on several studies indicating that these paradigms have had a distinct role in the history of management (Barley and Kunda, 1992; Guillén, 1994; Abrahamson, 1997; Wren, 2005). In addition, we examined the prevalence of strategic management, human resource management, and innovation theories, as these models of management have been discussed extensively in management literature over the last decades (Chandler, 1962; Yavitz and Newman, 1982; Porter, 1980; Storey, 2001; Guest, 2002; Heery and Noon, 2001; Amabile, 1988; Csikszentmihalyi, 2002, 2003; Damanpour, 1991; Florida, 2002). It is particularly interesting to include innovation theories in the Finnish case, because in recent years, innovations have come to be seen as a key success factor in Finland, both nationally and on the organizational level (Castells and Himanen, 2001; Himanen, 2007; Oinas, 2005).

The adoption of management paradigms has been studied on the national level (Barley and Kunda, 1992; Abrahamson, 1997; Banmen, 1971; Morgan, 2006), the institutional level (Guillén, 1994), and for example, in relation to academic education (Engwall and Kipping, 2004; Üsdiken, 2004; Seeck and Laakso, 2008). The use of management practices and techniques in different business

branches has also received attention (Seeck and Eräkivi, 2008; Laurila and Ropponen, 2003). However, it is difficult to find comparative studies on the use of management paradigms and theories in different lines of business, even though this kind of approach could highlight some interesting differences in the adoption of the paradigms. The adoption and use of management paradigms in personnel magazines has also received very little attention. Furthermore, we found only a few studies analysing personnel magazines (Click, 1967; Riley, 1992, Mattila, 2000), including a Finnish master's thesis that examined expressions of organizational culture in the personnel magazine of one large Finnish forest industry enterprise. These magazines have also been used as data in studies of foreign expansion in the forest industry (Laurila and Ropponen, 2003; Laurila and Lilja, 2002). Thus we chose personnel magazines as our data in order to gain an "insider's view" of the adoption and application of different management paradigms in organizations.

The purpose of the article is to examine 1) which of the management paradigms are used in the internal communication of organizations, 2) the timing of shifts in the use of management paradigms, and 3) the proportions of normative and rational paradigms in personnel magazines. We also examine if there is a difference in the use of rational and normative paradigms according to who is presented as the actor in the article, and hence how the position of the writer influences the texts and the paradigms used in them. Finally, we briefly compare the results on personnel magazines with the results of a study carried out on annual reports by the same corporations (Seeck and Eräkivi, 2008), in order to determine how the internal and external communications of the corporations vary in terms of normative and rational dimensions.

We consider this a fresh approach to studying the adoption of different management theories and paradigms and use it as a starting point in this paper. The adoption of management paradigms in Finland is worth studying because the country experienced record growth after the Second World War up to the mid-1970s, outpacing the average growth rate of Western economies (Karisto *et al.*, 1997), and previous studies have indicated a relationship between economic waves and the adoption of a particular type of management techniques (Barley and Kunda, 1992; Abrahamson, 1997). Present-day Finland, ranked second among global economies in investment in R&D as a percentage of GDP, is referred as "a textbook example of an innovative economy" (Rutten and Boekema, 2005, 1133). Finland also has a notably high number of patented inventions and published

scientific articles relative to its population (Airas, 2006; OECD, 2005; Seeck and Parzefall, 2008). The recent success of the Finnish mobile phone industry in general, and Nokia in particular is well-known (see Häikiö, 2002). Yet, the Finnish metal and forest industry enterprises entered the international market much earlier, and have remained the cornerstones of Finnish industry for decades (Ahvenainen and Kuusterä, 1982).

Finnish industrialization in the mid-19th century was thus largely founded on the production of iron and forest products. Tariff reductions and growing external demand at the end of the century spurred the development of Finnish forest and paper industries in particular (Heikkinen and Hoffman, 1982). After the Second World War, the importance of the metal industry grew, partly due to the massive war indemnities that Finland was obliged to pay to the Soviet Union. Post-war development of Finnish industry has also been strongly affected by the diversification of export products, the internationalization of industrial activity, trade liberalization, and EU integration (Pihkala, 1982). The metal and forest industries were the two most important industries in Finland until the 1990s, when the electronics and communications industries boomed. Even at this point, the significance of the traditional lines of industry remained firm. (Oinas, 2005; Pelkonen, 2005; Seeck and Eräkivi, 2008.)

2. Management paradigms as a way of conceptualizing the history of management

We now briefly depict the eight paradigms that were researched and surfaced from the data. *Industrial betterment* was born in the United States out of the need to improve employees' conditions of living in the latter half of 19th century. Working conditions of that time were often harsh and managers actions sometimes cruel and arbitrary. Employees' dissatisfaction with working conditions was expressed in many ways that harmed companies' productivity (Brandes, 1970; Barley and Kunda, 1992). Industrial betterment was a parallel phenomenon with the social change and technological revolution that enabled mass manufacturing. The aim of the managers was to educate the workforce and render it more cooperative by offering employees and their families various services such as houses, schools, churches and recreational facilities. (Barley and Kunda, 1992.)

Scientific management emerged in the United States in the beginning of twentieth century. It looked for solutions to problems such as worker's soldiering, lack of efficiency, and disorder. Scientific management was believed to be based on objective, scientific "facts" and sought the "one best way" of managing workers. (Guillén, 1994; Taylor, 1911/1967.) The new industrial processes invented by Frederick Taylor had a large impact on formation of the paradigm (Wren, 2005). Work was simplified and divided into small tasks, and the planning, execution and performance of work were clearly separated from one another (Guillén, 1994; Taylor, 1911/1967).

Like scientific management, the *human relations paradigm* also claimed to find objective solutions to management problems (Guillén, 1994). Nevertheless, the perceived problems and view of workers was very different from those of scientific management. Human relations criticized the excessive mechanization of work processes and saw it as the reason behind problems such as the monotony of work, absenteeism, unrest and disruptive attitudes. Human relations emphasized that workers were primarily people with group identity and emotional dependencies, and for this reason they could not be managed merely by reason (Roethlisberger and Dickson, 1939/1950; Mayo, 1933/2003). Social norms, values, needs and group relations should also be considered in organizing work (Barley and Kunda, 1992; O'Connor, 1999; Wren, 2005).

Both scientific management and human relations paradigms sought the "one best way" and reasserted manager's authority (Huhtala and Laakso, 2006; Seeck, 2008). They also neglected the influence of the organizational environment. In this respect, *structural analysis* represented a different view of management since the 1950s. It emphasized the importance of readjustment to the competitive and multinational environment of organizations. This could be achieved for example by optimizing and decentralizing the structure of organizations. Workers were thought to be adaptable to their structural situation. (Guillén, 1994.) Structural analysis was also influenced by operational research and the development of computer science (Barley and Kunda, 1992).

The strategic management approach can be seen as a continuum, and further elaboration of the structural analysis paradigm (Huhtala & Laakso, 2006; Seeck, 2008). Strategy was discussed by some writers of the structural analysis paradigm, who assumed that structural changes are made in order to meet the needs arising from the strategies of further expansion (e.g. Chandler, 1962). Also, Peter Drucker's (1954) concept of management by objectives brought up the procedure of setting objectives and

monitoring the progress made towards them on the organization level. Subsequent authors on strategy have focused more on the tools for the strategy process itself, for example different portfolio analyses, defining of core competencies (Hamel and Prahalad, 1990), or creating typologies of strategies for different competitive situations (e.g. Porter, 1980).

The organizational culture paradigm came into international academic discussion in the 1970s and 1980s. It brought the worker back to the centre of discussion (Barley and Kunda, 1992). Cultural aspects of organization were recognized and the Japanese model of work commitment and collaborative spirit was adopted as a model of an ideal organization. Unity and loyalty were seen as the primary attributes of a strong culture that would lead to success (Morgan, 1997). Culture is seen as a way of building and rebuilding a shared reality through which people can find mutual ways of understanding occurrences, actions, objects, and situations. A culture can be expressed as shared values, meanings, beliefs, and understanding (Morgan, 1997; see also Schein, 2001).

Human resource management can be defined as “simply a way of grouping together the range of activities associated with managing people that are variously categorised under employee relations, industrial/labour relations, personnel management, and organisational behaviour” (Heery and Noon, 2001). HRM literature typically identifies two approaches – soft and hard – for conceptualizing and evaluating HRM (Storey, 2001). The hard version is typically business-focused and draws on the calculative aspects of rational management of the employees, who are to a great extent equalled to any other factor in the line of production. The soft approach emphasises employee commitment, and the importance of winning over the hearts and minds of the employees, which is seen as critical to the achievement of corporate goals (Storey, 2001; Guest, 2002; see also Parzefall and Huhtala, 2006).

The latest of the paradigms, *the innovation paradigm*, was born out of the need to constantly improve and develop new products and solutions for rapidly changing market needs (Seeck, 2008). The roots of the innovation paradigm can be traced to the rise of competition strategies in the 1960s (Kantola, 2006a). The core aim of the innovation paradigm is to increase the productivity of workers by getting them to constantly improve products and processes, and to develop new ones in order to improve the competitiveness of organizations (Seeck, 2008). Innovation can be seen as a process where new ideas are captured, filtered, financed, developed, adapted, and finally realized and commercialized (McLean, 2005; see also West and Farr, 1990; Kanter, 1988).

3. Methodology

Personnel magazines were chosen for the research data of this study because they offer rich data and a long historical perspective into corporations. Another reason for analysing personnel magazines, is the fact that they have been utilised surprisingly little in earlier research, even though they are abundant and easy to obtain. Outokumpu, Rautaruukki, UPM-Kymmene and Ahlstrom¹ were selected for the study on the grounds that they are among the biggest Finnish corporations in their lines of industry and are on the main list of the Helsinki stock exchange. The period of study was from the 1930s to 2007, but varied slightly from magazine to magazine as all of them had not been in publication for the entire period. The personnel magazines of metal industry corporations were available from 1949 and 1960, and the magazines of forest industry enterprises were available from 1931 and 1956. All the corporations had several personnel magazines and newsletters as many of their various factories and mines had their own magazines. We chose the main magazine of the corporation distributed in most of the factories, or, in such cases where such a magazine was not found, we chose the one with the longest history and best availability. These magazines could be considered to represent the views and approaches to management of the company as a whole, because in addition to local news, the magazines frequently published the views of and messages from general management, e.g. in the form of regular columns such as "Concern Corner" or "Message from the CEO".

Content analysis is an adequate method for the systematic analysis of large bodies of text (Hansen, *et al.*, 1998) and is well-suited to the extrapolation of trends (Krippendorff, 2004). Our analysis combined qualitative and quantitative methods. First, we read the magazines volume by volume to gain an overall picture of the contents. Prevalent themes as well as emerging new management-related phenomena were recorded for each decade. Central turning points in the history of the corporations were also documented. After acquiring a general grasp of the contents, we conducted quantitative analysis. For each of the four magazines, two issues were randomly picked from each year that the magazine had been published. From each issue, we chose one article discussing management, organization, the organizing of work, or employee training to be included in the data. However, some volumes did not include two issues

¹ Outokumpu was first founded in 1914. In 2007, Outokumpu Group's sales were 6.9 billion Euros, of which some 95% was generated outside Finland. Rautaruukki was founded in 1960, and in 2007 its net sales totalled 3.9 billion Euros. UPM-Kymmene was formed through the merger of Kymmene Corporation and Repola in 1996. The history of these enterprises dates back to the beginning of the 20th century. In 2007 UPM-Kymmene's

containing articles on management, and in these cases, we had to settle for only one issue per year and compensate for this by picking three issues from the following volume. Finding articles on management was at times difficult for the period from the 1930s to the 1960s, but since the 1970s they were abundant, a total of 502 articles were included in the empirical analysis.

Content analysis was conducted with the help of the table by Guillén (1994), listing the characteristics and typical techniques of scientific management, human relations and structural analysis. Similar lists of characteristics were drawn up for industrial betterment, strategic management, human resource management, organizational culture theories and innovation paradigms (see table 1, on p. 27). However, some of the articles did not match any of the paradigms, whereas some of the articles fit several categories. In cases where an article did not seem to discuss any of the paradigms, it was classified into the as "other". The categorization of the articles into the different paradigms is shown in table 2 (see p. 28). The paradigms were rarely referred to by name in the articles and were principally identified through references to techniques or ideas regarding workers or the organization of work which are typical of each of the paradigms. The writers of the magazines were not necessarily aware of their existence in their text or able to put a name to it.

4. Management paradigms in personnel magazines of metal industry: from dominance of industrial betterment to abundance of organizational culture

net sales were 10.0 billion Euros. Ahlstrom Ltd. was founded in 1908, and originates from a family saw mill, iron and shipping business, established in 1851. Ahlstrom's net sales were 1.8 billion Euros in 2007.

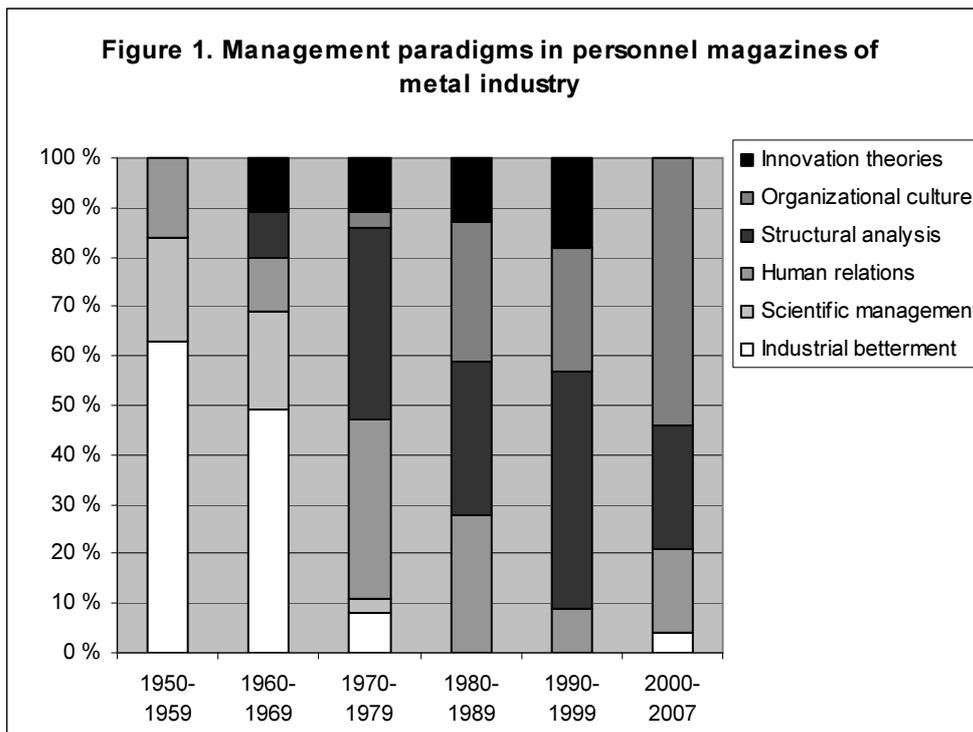


Figure 1: Management paradigms in the personnel magazines of metal industry

Figure 1 shows the proportions of management paradigms in the metal industry in different decades. Industrial betterment was the dominating paradigm in the metal industry personnel magazines in the 1950s and 1960s, but the central themes associated with scientific management and human relations, for instance rationalization of work and mines, employee well-being and initiative competitions for employees, were also covered. In these decades, the Finnish metal industry concentrated on the mining and upgrading of ore. As the mines were usually far away from population centres, corporations had to build a good deal of infrastructure and services for the miners, factory workers and their families. Whole communities were built up near the mines (Kuisma, 1989). The personnel magazines of that time seemed to play a significant role in creating a sense of community among families which had moved in from different areas. The articles of that period discussed industrial safety, occupational education, drilling competitions, rationalization, and initiative competitions, but also the building of schools and homes, recreation, homemaking, health, family issues, birthdays and obituaries.

The appreciation of work is among the most important factors increasing job satisfaction. Everyone is entitled to be happy, even proud of their achievements. A person needs to feel that he or she is trusted and worthy of trust. [. . .] Job satisfaction is also strongly affected by many factors outside of work:

place of residence, housing conditions, the well-being of wife and children, etc. Consequently, these things are also in the sphere of interest of the company. (Titaani 3/1969, 3.)

Sports seem to have had an important role in building a sense of community and togetherness, as sports-related reports from within the corporation often covered one third or even a half of the magazine. Introductions of the various mines and factories of the corporations were also a common feature on the pages of personnel magazines.

At the end of the 1960s, communications, the internationalization of business, exportation, research and development, automation, and industrial relations emerged as central topics in the magazines. Some of these topics reflected the rise of the structural analysis paradigm that was the leading management paradigm in personnel magazines of the 1970s. This was also the period when Finland acceded to international and European trade treaties: Finland became an associate member of EFTA in 1961 and a member of the EEC in 1976, which facilitated the activation of international trade (Pihkala, 1982). The growing contingency of operational environment, growth of the export sector, the oil crisis, and environmental problems also affected the Finnish metal industry, and called for a new, more structurally-orientated model of management.

Through mutual efforts we must explore every possible means of improving productivity and also bring them into effect. These expedients include work arrangements, automation, new engines, and inspection of the necessity of every supporting task. The above-mentioned measures are necessary because we must compete with increasingly higher standard factories in the steel market, both on the domestic front and the export market. (Titaani 4/1978, 7–8.)

About one third of articles in the 1970s represented the human relations school discussing the new Act on Co-operation within Undertakings, internal communications, workers' opportunities to participate in corporate governance, industrial democracy, and employee well-being. Lilja (1987) has characterized the 1970s as "the decade of personnel administration" because at the time, personnel administration was presented in management education materials, and workers in personnel management became interested in professional co-operation. By comparison, industrial betterment and scientific management had almost disappeared from the management discussion of personnel magazines in the 1970s. The significance of the magazines for producing a sense of community also seems to have diminished by that time.

In the 1980s, three paradigms – the human relations school, structural analysis and organizational culture – were presented almost equally as often in management articles of personnel magazines, about 30% each. The remaining 13% of the articles dealt with innovation theories. In the 1980s, many articles continued to discuss the metal industry's adaptation to changing conditions. At the beginning of the 1990s however, Finland experienced a severe economic recession that was manifested in the personnel magazines in the form of discussions on cost cuts and the rationalization of company structure. In fact, almost half of the articles from the 1990s concerned structural analysis. One in four of the articles presented organizational culture, and the popularity of the innovation paradigm reached its highest point, although it did not rise higher than 18%. Innovation theories have been discussed in personnel magazines since the 1960s, but never gained a leading position among management paradigms.

Over three years have passed since innovation activity in its present-day form started in the company. In 1969 the so-called innovation regulations were confirmed for the whole company. On the one hand, they provide the inventor with terms of reference as to how to carry the invention forward inside the company and, on the other hand, specify the organization that deals with innovations. (Outokummun Sanomat 2/1973, 27.)

There were no articles on the innovation paradigm in the sample from the first decade of the 21st century even though innovations and innovation policy have been widely discussed in the Finnish media, government platforms (Seeck and Parzefall, 2008; Seeck, 2008) and to some extent in annual reports (Kantola, 2006b; Seeck and Eräkivi, 2008). Instead, organizational culture was the most frequently used paradigm in the management discussion in the magazines of the past eight years.

The company's new marketing name and image seem well-suited and fresh. [. . .] Now we have a uniform appearance, which will benefit us. [. . .] I believe that the uniform look will also be manifest in the company culture as an increasing sense of togetherness as we all work under the same marketing name. (Into 1/2004, 3.)

Strategic management and human resource management were left out from the figure, as only one percent of the articles studied represented each of these paradigms. Even though the category "other" was used in the analysis, it was omitted from the graphs presented in this article because it was small and no single topic emerged strongly from it.

5. Management paradigms in personnel magazines of forest industry: several parallel paradigms

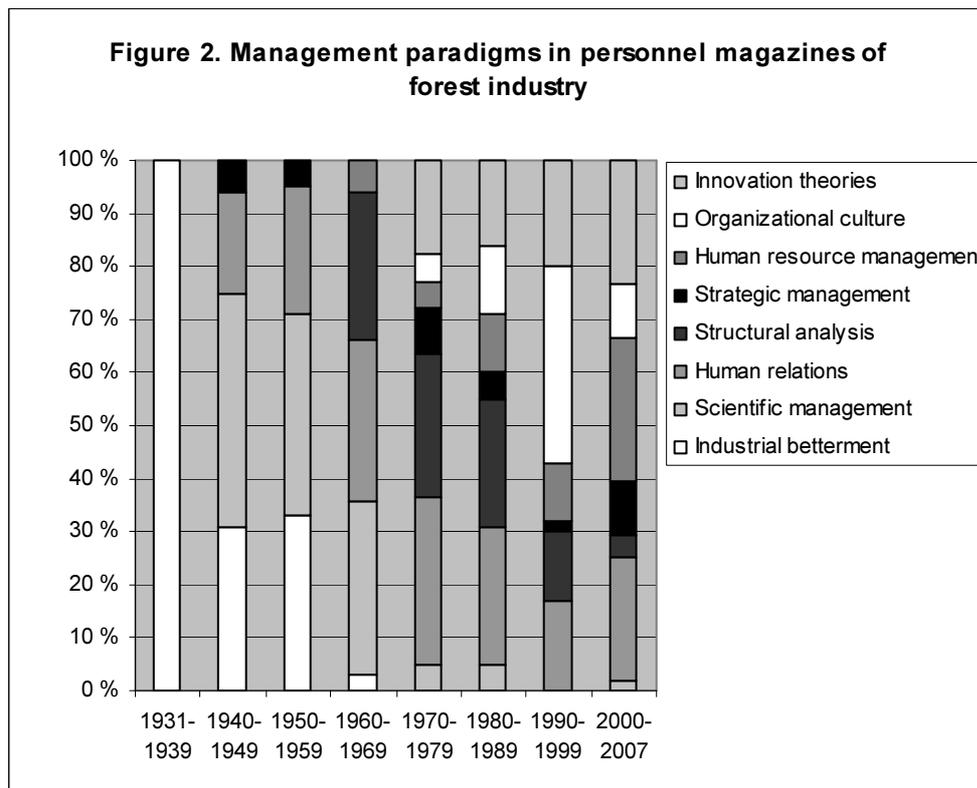


Figure 2: Management paradigms in personnel magazines of forest industry

Figure 2 shows that in the personnel magazines of forest industry corporations, the differences between paradigms in different decades are less clear, especially from the 1960s onwards. It seems that several paradigms have been discussed simultaneously. Industrial betterment dominated the discussion in the 1930s and continued to hold the largest proportion of articles in the 1940s and 1950s, only to disappear entirely after that. Like production facilities in the metal industry, paper mills were built to be in operation for decades and required many workers. This is why the housing and well-being of employees and their families were considered important: to ensure the continuous availability of workers in the mill sites. A statement by one CEO on industrial betterment highlights this necessity:

The employer must be aware that the success of the company requires that the living conditions and social conditions of the employees are arranged in an appropriate manner. (Työn äärestä 1/1936, 8.)

Scientific management was the most commonly applied paradigm in the 1940s and 1950s. The personnel magazines in our data introduced methods of scientific management by communicating its benefits and

by publishing long articles on its theoretical premises, using international examples such as production rationalization.

The suggestion scheme is one form of rationalization aiming to encourage every employee and supervisor to participate in the pursuit of the greatest possible efficiency in the production. [. . .] We must keep in mind that for every task there are several good and acceptable ways to perform it, but that only one way is best. (Työn äärestä 3/1945, 3.)

Interestingly, a subtle critique of rationalization can also be found between the lines during the same time period, in the form of satiric columns and caricatures published under pseudonyms. After the 1950s, no clear leading paradigm could be detected with the exception of organizational culture, which was dealt with in 40% of articles in the 1990s. This might reflect the development of the Finnish pulp and paper industry as a whole: the line of industry had started to concentrate during the 1930s, and the enterprises became large and powerful. Individual executives had important personal influence and personal ties to practically all areas of the Finnish society (Aunesluoma, 2007) and hence held power as protectors and benefactors of their employees. In addition, after Finland's independence in 1917, the pulp and paper industry companies had co-operatively outsourced numerous functions including raw material purchasing, research and development, energy production, and sales and marketing. The organizations that managed these on behalf of the corporations were jointly managed by the pulp and paper companies, and in practice this resulted in conditions where the pulp and paper companies operatively managed only their production, and supervised their interest in the joint organizations taking care of other functions (Jensen-Eriksen, 2007). During the 1980s and 1990s, this system of legal cartels was gradually dismantled. This might have caused a fragmented pattern of use of different paradigms during this period, as the companies had to start managing the tasks that were previously carried out in joint organizations, and, therefore, faced a multitude of new managerial challenges. One explanation for the popularity of organizational culture might be that a second period of concentration in the forest industry took place in the 1990s, and for example at UPM-Kymmene, established in 1996, the formulation of basic values and organizational culture was carried out simultaneously in order to facilitate the merger of two large corporations.

Otherwise, no paradigm can be said to dominate the writings of personnel magazines of forest industry. The proportion of articles discussing the human relations school is quite steady from 1940s to the end of the period of study. In the 1970s and 1980s, human relations is the most commonly referred

paradigm, although the margin to the other paradigms is narrow. In the 1970s, the themes of the human relations school are manifested as opinion polls and articles on industrial democracy. The proportion of innovation theories has also been steady since the 1970s, comprising about one in five management articles. Research and development was a particularly central topic in the 1980s. Innovation theories were often discussed simultaneously with the importance of customer satisfaction and the future of the company, or the Finnish forest industry in relation to their competitors. Structural analysis was quite strong from the 1960s to the 1980s, when internationalization emerged as a central topic, and different functional and strategic business unit organizational models appeared one after another. After the 1980s, however, discussion on structural analysis has disappeared almost completely. Strategic management and human resource management have been more influential in the forest industry than in the metal industry. In recent years, human resource management has in fact been the most significant management theory in the forest industry, represented in one in four articles.

6. Discussion: Comparing the personnel magazines of two industries in terms of normative and rational paradigms

The final purpose of this paper is to examine the differences between the metal and the forest industry in relation to the proportions of normative and rational paradigms, as conceptualized by Barley and Kunda (1992). From this point of view, scientific management and structural analysis can be seen as rational control, since the proponents of these paradigms pursue productivity by computing, analysing and optimizing work process and organizational structure. They see managers as experts, and workers as calculating actors whose actions can be predicted. By contrast, industrial betterment, the human relations school, and the organization culture paradigm represent normative control. They emphasize shared norms and values and the communal aspect of work. According to normative rhetoric, a manager's duty is to inspire and to motivate workers and to secure their well-being (Barley and Kunda, 1992). The characteristics of the innovation paradigm suggest that it can be considered to belong to rational paradigms (Seeck, 2008).

The proportions of rational and normative paradigms are demonstrated in tables 3 and 4. Earlier studies have indicated that rational paradigms seem to have been favoured in Finland at the expense of normative paradigms (Seeck and Kuokkanen, 2007; Seeck, 2008; Seeck and Eräkivi, 2008).

Therefore, it is interesting that the topic of scientific management was almost non-existent in the personnel magazines of the metal industry, because in other respects it has been shown to have been an influential paradigm in Finland (Kettunen, 1994, 1997; Michelsen, 1999, 2001; Seeck, 2008), and references to it are abundant in annual reports (26% of utterances on management paradigms during the period 1980–2007) (Seeck and Eräkivi, 2008). Overall, the proportion of normative paradigms exceeded the proportion of rational paradigms in the personnel magazines of both industries, and management discussion in the metal industry personnel magazines stressed normative paradigms slightly more than that of the forest industry magazines. Normative paradigms were emphasized in both industries at the beginning and at the end of the examined period. Rational paradigms were discussed most in the 1970s and 1990s in the metal industry, and in the 1960s, 1970s and 1980s in the forest industry.

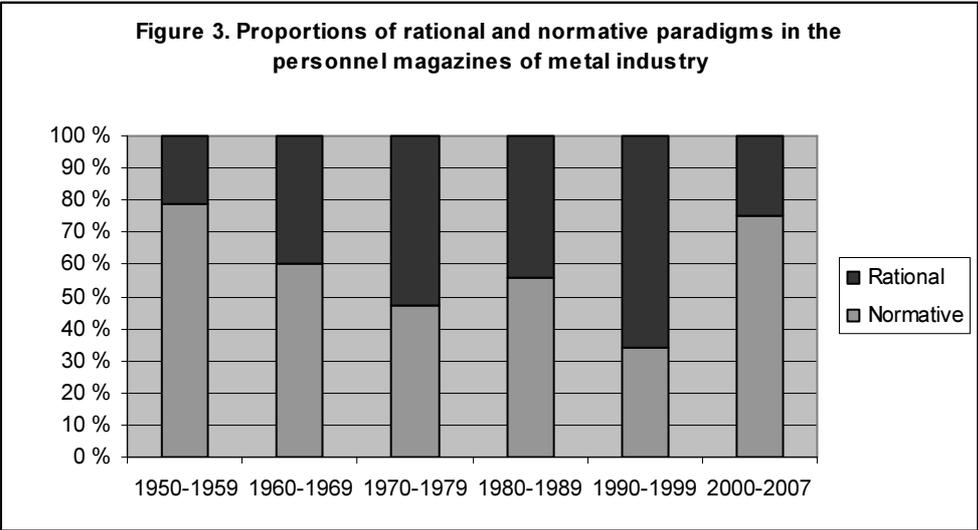


Figure 3: Proportions of rational and normative paradigms in the personnel magazines of metal industry

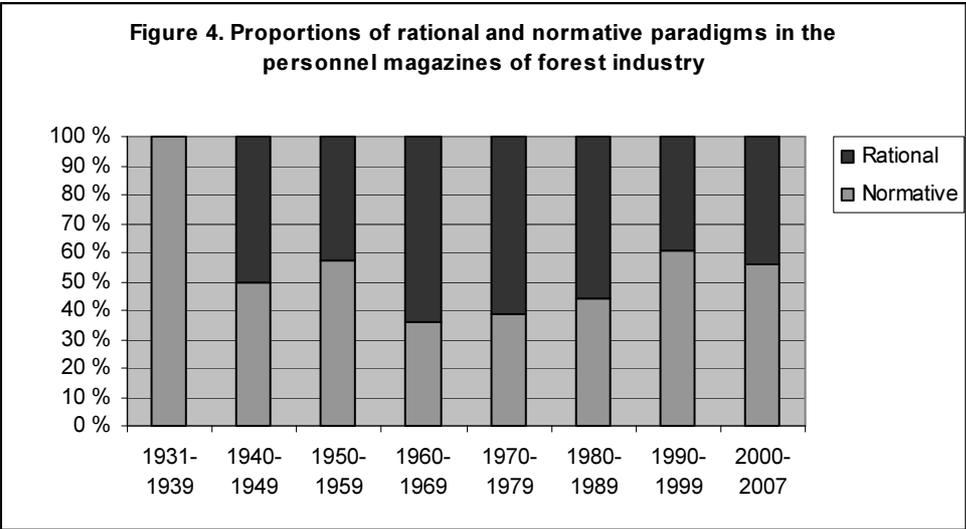


Figure 4: Proportions of rational and normative paradigms in the personnel magazines of forest industry

The use of normative paradigms can be seen as reflecting the personnel magazines' role in the production of loyalty, unity and commitment among employees. This is most clearly visible in the magazines of the forest industry in the 1930s and of the metal industry in the 1950s and 1960s, when communities were being constructed in new factory towns. In the personnel magazines, this is evident in the large proportion of normative management rhetorics. Similarly, normative paradigms dominate the management discussion of the personnel magazines of metal industry in the first years of the 2000s by three quarters of all the articles (see table 3). This can probably be at least partly explained by recent reforms in the examined companies. Both Outokumpu and Rautaruukki have readjusted their strategic plans in recent years, Outokumpu with the decision to concentrate on stainless steel and Rautaruukki focusing more on the special needs of its customers. The Chief Executive Officer of both companies has also changed recently. The sum of this has probably created a need to clarify and to communicate companies' image to their employees, customers, shareholders and other stakeholders.

On this account, it becomes understandable, why normative rhetorics are in the majority in personnel magazines, even though in annual reports rational paradigms are much more common. A study analyzing annual reports of seven Finnish metal and forest industry companies from 1980 to 2007 showed that rational paradigms were represented in about 70% of the utterances concerning management paradigms in every decade studied (Seeck and Eräkivi, 2008). Rational rhetorics have also been emphasized in the platforms of the Finnish government throughout almost the entire period of the nation's independence (since 1917) (Kantola, 2006b; Seeck, 2008).

Previous research has indicated that when examining the core industries of the Finnish economy, the role of institutional management should be taken into account in addition to corporate level management practices. Lilja and Tainio (2006) argue that after the Second World War, the international market forces and national interests of Finland were reconciled by governmental power. Rather than a completely free market economy, the Finnish economic system constituted a partly planned economy that imposed several restrictions on the managers' freedom of action. Corporations were, for instance, dependent on the government's fiscal regulations and trade agreements with the Soviet Union. The government was also able to resort to devaluation to secure the competitiveness of Finnish companies in the world market. Hence, a great deal of managers' time was taken up by finding ways to manage these

limitations. (Lilja and Tainio, 2006.) Based on this, Lilja and Tainio (2006) put forth the theory that in Finnish corporations, institutional management was emphasized at the expense of strategic management. It was not until Finland's EU membership in 1995 that the Finnish system became a free market. Still today, however, in a small country such as Finland managers must always operate in conditions defined by a small national economy and large and powerful neighbours (Lilja and Tainio, 2006; Seeck, 2008). This may partly explain why strategic management has been an almost non-existent topic in both personnel magazines and annual reports. Institutional conditions of management may also help to explain a period stressing rational paradigms in personnel magazines of the forest industry from the 1960s to 1980s. In these decades, for instance agreements with the Soviet Union had a strong effect on business operations, which may have drawn the managers' attention to rational matters rather than strengthening the personnel's feeling of togetherness. In addition, several other changes in operational environment also favoured rational and structural approach in the decades in question.

Finally, we examine what kind of influence, if any, the actor of the article has on the use of normative and rational paradigms. First, we found a rather significant difference between metal and forest industries in the proportions of managers and workers as actors in the articles. In personnel magazine articles of the metal industry, the worker was the actor in 67% of the articles, whereas in personnel magazines of the forest industry the worker was presented as the actor in only 37% of articles on management. In other words, workers were much more visible in the management discussion in personnel magazines of the metal industry than in the corresponding publications of the forest industry. This finding supports our assumption that it is worthwhile studying the adoption of management paradigms on the level of different sectors of industry, as significant differences can be found between them, even when the institutional background of the sectors is rather similar.

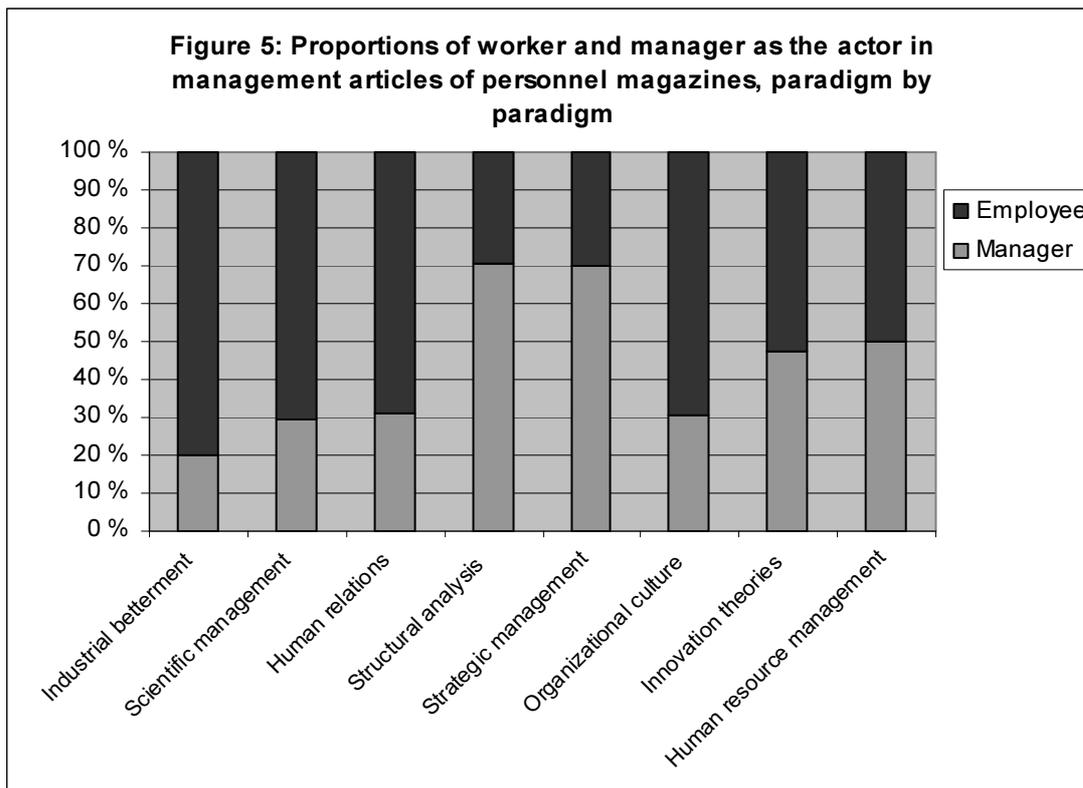


Figure 5: Proportions of worker and manager as the actor in management articles of personnel magazines paradigm by paradigm

However, the difference can be partly explained by the fact that the metal industry has leaned towards normative paradigms slightly more than the forest industry. Figure 5 shows how the actor in the article is related to different paradigms. Results from both industries have been summed. Structural analysis and strategic management are mostly articulated by the manager, whereas the normative paradigms – industrial betterment, human relations and organizational culture – are considered to illustrate the viewpoint of the worker. Normative paradigms are probably articulated more by workers because they seek to influence workers through a sense of community, motivation and psychological factors rather than via rationally or technically justified arguments, which are common in articles discussing structural analysis, and often expressed by the CEO or other representatives of the company. In other words, we can assume that normative paradigms are more frequently communicated by workers. There were, however, a few exceptions. Scientific management for example, despite being a rational paradigm, was mainly discussed from the viewpoint of workers. Innovation theories and human resource management were located in the middle.

7. Conclusion

This paper contributes to management history literature by providing an original example of comparative research on the adoption of management paradigms between different lines of business. It also offers one national case that could be used in a comparative study between countries. Our analysis indicates that normative management paradigms have been more influential in the management discussion of personnel magazines than rational paradigms, even though earlier studies have shown that rational paradigms have been used more in companies' external communication and in Finnish management journals and literature. Industrial betterment, for example had a significant role in both industries at the beginning of the research period, despite being virtually non-existent in earlier studies on the adoption of management paradigms. (Kettunen, 1997; Michelsen, 2001; Seeck and Eräkivi, 2008.)

Our study also shows that normative paradigms have been more often expressed by employees, whereas rational paradigms have been articulated by managers and other company representatives. This can be partly explained by the personnel magazines' role in creating a sense of community between employees. However, as Barley and Kunda (1992) point out, normative paradigms always contain aspect of normative control. By uniting work organizations, normative control can also shape workers' identities, attitudes, and beliefs as well as blur the boundary between work and leisure (Rose, 1989; Barley and Kunda, 1992). On this account, from the employee viewpoint, it is important to recognize the forms of normative paradigms as well as rational paradigms in order to be able to assess the presumptions and ideological engagements behind them. Methodologically, our study indicates that personnel magazines provide rich data that could offer potential material for further research (see also Jameson, 1994), to, for example, supplement interviews and other data in case studies.

The comparison between different sectors proved to be valuable, and further research on different industries could thus offer us new information regarding the adoption of management paradigms. By comparing the adoption processes we could find out more about the institutional factors (such as structural-economic changes on industry level, international pressures and opportunities, management elite mentalities, labour unrest, and the role of state, see Guillén 1994) that may promote or prevent the adoption of a certain paradigm. It would also be interesting to study the actual effect of management paradigms on the practice of management in these industries. Personnel magazines offer one perspective to management and organizational change, but other data could also be used to examine the

actual management techniques related to management paradigms. Thus, interviews of former and present managers and employees could improve our understanding on how and when new management practices have been taken into use, and how they are connected to management paradigms and ideologies.

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	Scientific management	Human relations	Structural analysis	Organizational culture	Innovation theories
Ideological features	<i>Perceived problem</i>	<i>Perceived problem</i>	<i>Perceived problem</i>	<i>Perceived problem</i>	<i>Perceived problem</i>
	Soldiering, waste, disorder, management arbitrariness and greed, lack of control.	Monotony of work, conflict, unrest, absenteeism, turnover, low morale.	Mismatch between organizational structure, technology, and environment.	Low productivity, low commitment, management of professional employees.	Need of constant improvement and new products and solutions for the market in order for the organization to remain competitive.
	<i>General form of solution:</i>	<i>General form of solution:</i>	<i>General form of solution:</i>	<i>General form of solution:</i>	<i>general form of solution:</i>
	One best way.	One best way.	Contingency approach.	Contingency approach.	Contingency approach.
	<i>View of industrial conflict:</i>	<i>View of industrial conflict:</i>	<i>View of industrial conflict:</i>	<i>View of industrial conflict:</i>	<i>View of industrial conflict:</i>
	Avoidable: more surplus benefits for both workers and management.	Avoidable: co-operation is human nature. The organization as a social system.	Is structurally-shaped, and not necessarily bad, generates change.	Conflict illustrates clash of organizational and individual values.	Is structurally-shaped, and not necessarily bad, generates change.
	<i>View of workers and way of dealing with them:</i>	<i>View of workers, and way of dealing with them:</i>	<i>View of workers, and way of dealing with them:</i>	<i>View of workers, and way of dealing with them:</i>	<i>View of workers, and way of dealing with them:</i>
	Driven by self-interest; need to be told what to do, and supervised.	Driven by psychosocial norms, needs, emotions; need to be led.	Driven by professional aims and professionalism, with aims to improve expertise or managerial skills through , for example management training. Structural position impacts the behaviour of both employees and managers. Need to be treated as rational actors, as professionals.	Driven by a need for belonging. Workers have other objectives besides pay, for example a need for commitment. Workers can be led by modifying their values and attitudes to match the aims of the organization (in cultural engineering approach).	Driven by the need for constant regeneration. Workers have other objectives in addition to pay, for example the need to use their creative potential and knowledge. Particularly in knowledge-intensive organizations, workers are seen as the most valuable asset of the organization. However, they are rather easily replaceable, and providing a long career is often not perceived as one of the aims of an organization. The aim is rather to constantly renew the organization, including its employees and hence quickly adapt to the needs of the market.
Technical features	<i>Fascination with:</i>	<i>Fascination with:</i>	<i>Fascination with:</i>	<i>Fascination with:</i>	<i>Fascination with:</i>
	Machinery, technology, factory aesthetic, mass production.	Communal life, interaction in social groups	Ubiquity and complexity of organizations in modern society.	Community, shared values, habits, practices, building reality through social interaction.	Novelty, change and creativity, innovativeness, continuous improvement and flexibility
	<i>Methodology:</i>	<i>Methodology:</i>	<i>Methodology:</i>	<i>Methodology:</i>	<i>Methodology</i>
	Time and motion study, job analysis, piecework.	Surveys, interviews, discussion groups, job rotation.	Comparative study of cases, typologies of organizations.	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.	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 well as securing sufficient funding for research and development. Customer-driven, open to continuous improvement, and ready to reform ways of operating.

Table 1: Features and characteristics of management paradigms used in the analysis (scientific management, human relations and structural management are based on Guillén, 1994, 10–11)

Table 2. Matches of articles with examined paradigms.

Outokumpu	1931-39	1940-49	1950-59	1960-69	1970-79	1980-89	1990-99	2000-07
Industrial betterment	-	-	12	8	0	0	0	0
Scientific management	-	-	4	3	0	0	0	0
Human relations	-	-	3	1	5	3	3	2
Structural analysis	-	-	0	2	8	5	4	2
Strategic management	-	-	0	0	0	0	0	1
Human resource management	-	-	0	0	0	1	1	0
Organizational Culture	-	-	0	0	1	6	5	8
Innovation theories	-	-	0	2	4	1	4	0
Rautaruukki	1931-39	1940-49	1950-59	1960-69	1970-79	1980-89	1990-99	2000-07
Industrial betterment	-	-	-	9	3	0	0	1
Scientific management	-	-	-	4	1	0	0	0
Human relations	-	-	-	3	8	6	0	2
Structural analysis	-	-	-	1	6	5	12	4
Strategic management	-	-	-	0	0	0	1	2
Human resource management	-	-	-	0	0	0	0	0
Organizational Culture	-	-	-	0	0	3	3	9
Innovation theories	-	-	-	2	0	3	2	0
UPM-Kymmene	1931-39	1940-49	1950-59	1960-69	1970-79	1980-89	1990-99	2000-07
Industrial betterment	12	5	7	1	0	0	0	0
Scientific management	0	7	5	5	1	2	0	1
Human relations	0	3	4	6	7	6	6	10
Structural analysis	0	0	0	6	9	4	3	2
Strategic management	0	1	1	0	2	1	0	2
Human resource management	0	0	0	1	2	1	5	9
Organizational Culture	0	0	0	0	2	2	9	3
Innovation theories	0	0	0	0	7	4	3	5
Ahlstrom	1931-39	1940-49	1950-59	1960-69	1970-79	1980-89	1990-99	2000-07
Industrial betterment	-	-	0	0	0	0	0	0
Scientific management	-	-	3	7	1	0	0	0
Human relations	-	-	1	5	7	4	2	1
Structural analysis	-	-	0	4	3	5	3	0
Strategic management	-	-	0	0	2	1	1	3
Human resource management	-	-	0	1	0	3	0	4
Organizational Culture	-	-	0	0	0	3	8	2
Innovation theories	-	-	0	0	1	2	6	6

Total number of articles analysed was 502, including 52 articles (12%) that could not be classified into any of the above categories.